a R. C. Smith publication

FIFTY CENTS

JAN -6 1958

Per Check

Textile Industries

JAN 8 - 1958

Formerly "COTTON"

JANUARY, 1958

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Complete list of contents pages 3 and 4

Complementing each other

HARTFORD

● Autolatching Bobbin Hangers accommodates from 8x4 to 12x7

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● Ball Bearing Filling Spindles: Top Drive & Acorn Drive

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● Ball Bearing Warp Spindles — for Paper Tube or Wood Bobbin

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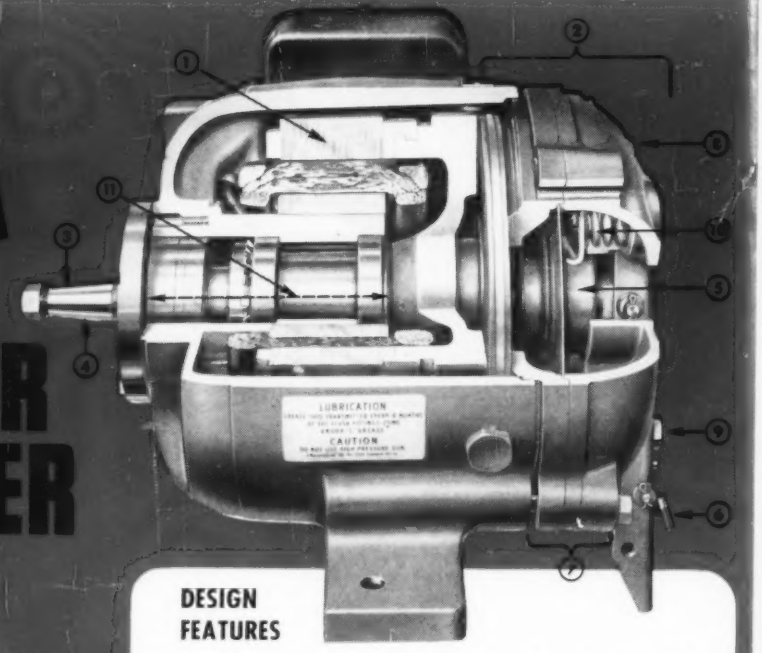
Next month: A special section on Purchasing for the Textile Mills

THE DEPENDABLE DIEHL

"BA" POWER TRANSMITTER

For Draper Looms

Exclusive new design features mean . . . *consistent* quality production . . . *peak* operating efficiency . . . minimum maintenance, labor and costs!



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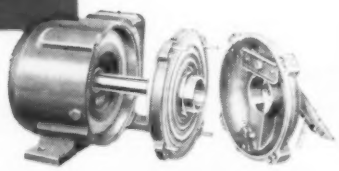
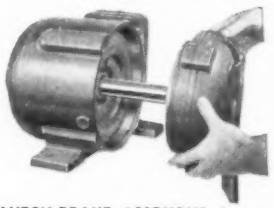
*1. High inertia inverted motor provides "stored energy" for smooth, fast starts and positive picking (maximum inertia with minimum size) . . . prevents regeneration.

STREAMLINED FRAME
Easy to clean. Roomy terminal box.

KINETIC BRAKING ACTION
(See Feature 6)



CLUTCH-ACTUATING BEARING—A strikingly new and improved method of mounting. (See Feature 5)



CLUTCH-BRAKE ASSEMBLY—Improved, simplified. Readily removable as a unit. (See Feature 2)

The original and only loom power transmitter . . . plus many outstanding design and construction features never before incorporated in a loom drive!

Over 40,000 Diehl Power Transmitters have been in continuous operation on DRAPER LOOMS—*most of them more than six years!* The "BA" Power Transmitter is even *more* compact, *more* streamlined, *more* efficient and *more* easily installed and serviced than its famous predecessor.

It's an inverted-type high inertia motor combined with a fast, positive clutch-brake mechanism. Note the exclusive design features—the clutch-actuating bearing mounting . . . the kinetic braking action . . . the unitized clutch-brake assembly. These important advancements mean increased production . . . improved cloth quality . . . lowered operating costs . . . fewer shutdowns. *Write, wire or phone today for full information.*

plus these outstanding Features

*2. **CLUTCH-BRAKE ASSEMBLY**—Improved and simplified for positive action and ease of adjustment. Removes readily as unit for maintenance, without disconnecting motor from loom frame.

3. **PINION**—Free accessibility for installation and maintenance.

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*5. **CLUTCH-ACTUATING BEARING**—New diaphragm mounting for frictionless clutch action, positive radial rigidity of bearing . . . eliminates fretting corrosion . . . means full self-alignment of bearing for maximum life.

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*8. **CLUTCH-SETTING INDICATOR**—Built integral with unit for instantaneous external checking of clutch setting.

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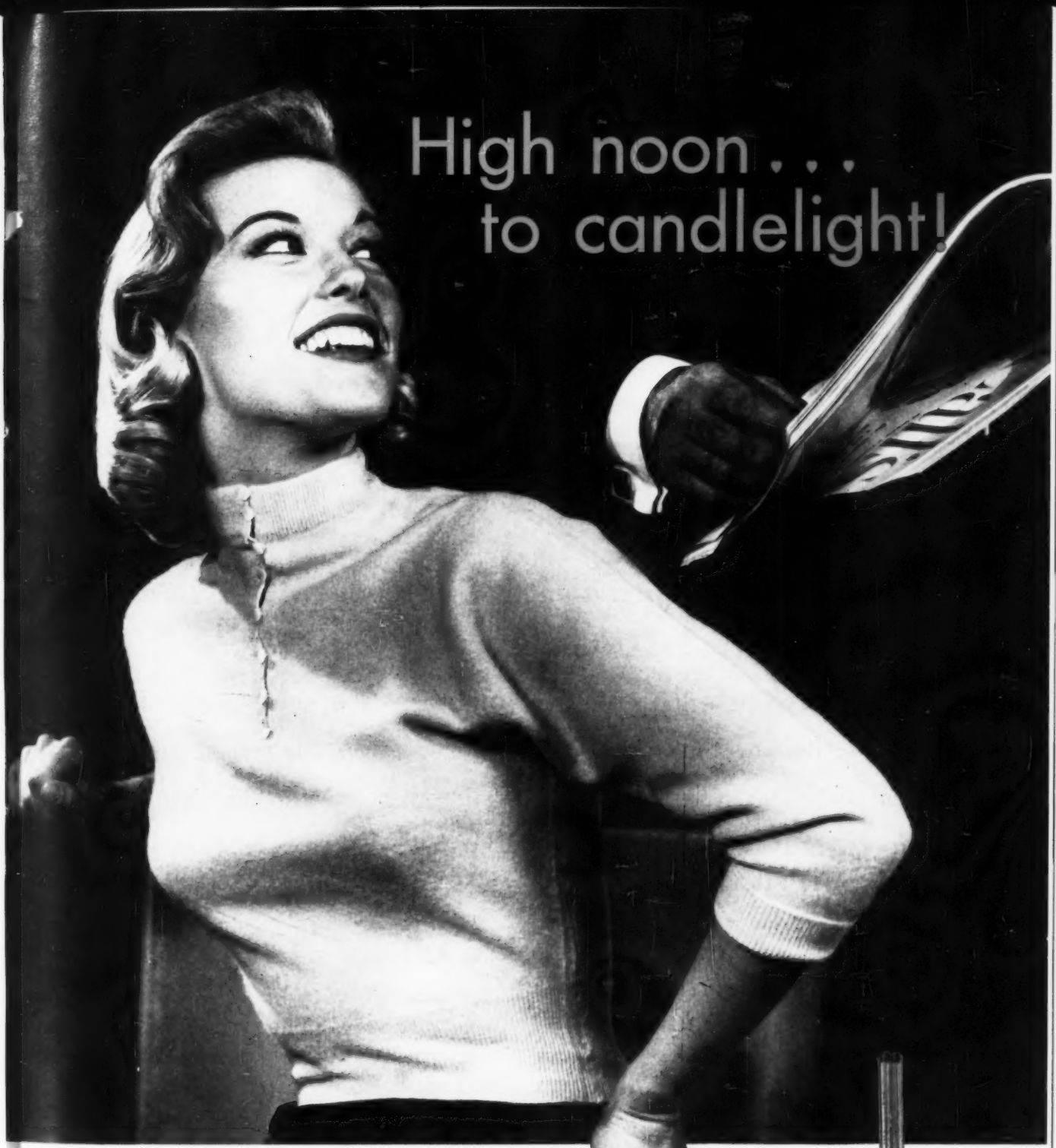

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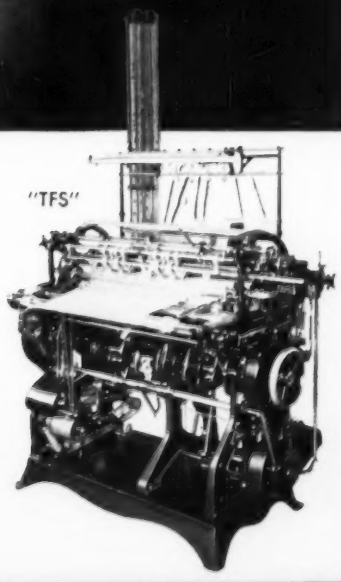

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JAN -6 1958

NBP BPA

Textile Industries

Formerly "COTTON"

Vol. 122, No. 1
January, 1958

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TIME SAVER for busy readers

Here is a summary of the major articles in this issue
Use it to organize your reading time most effectively

Fabric Defects in Wool Finishing 71

■ The second in a series of two articles written by Richard G. Stoehr, vice-president and general manager of Botany Finishing Co., Passaic, N. J., examines each operation in dry finishing (the first article dealt with wet finishing), lists the defects which can occur at each operation, and gives both the causes and corrections. Among the dry finishing steps discussed are tentering, shearing, and pressing.

Bad Work Detective 76

■ A TI editor visited the Lindale, Ga., plant of Pepperell Mfg. Co. and returned with a story of some classy sleuthing being done by an accessory of the Uster Tester—the Uster Spectrograph. Connected to the tester, the instrument draws a "picture" of any repetitive variations in sliver diameter which are serious enough to impress the Spectrograph.

The quality control laboratory at Lindale uses the instrument to find machine malfunctions which otherwise are able to hide themselves in the patterns traced by conventional sliver testers. Thus bad sliver sometimes turns out to be good sliver; and good sliver sometimes turns out to be bad sliver. The instrument "names" the roll that causes the defect.

It will read the variations in drawing sliver without being influenced by irregularities inserted at the cards, etc. By the same token, spinning tests are not influenced by bent drawing rolls, etc.

Tufteds in England 82

■ In an exclusive report to TI, P. Abbenheim points out that although the British tufted carpet industry is now only about three years old, there are about 15 manufacturers of tufted carpets in England. Many of them use American equipment.

For a time a single producer in England made tufted carpets of blended loop pile, and with polyvinyl chloride backing, the latter being promoted for its flame resistance. The firm had the market very much to itself.

Recently several firms combined to form a single organization for the production of tufted carpets. The new producer is turning out carpets with all-viscose pile, and is marketing the line under its own merchandising scheme.

Everything being considered, the growth pattern of the British tufted industry resembles our own.

How One Mill Sets Rolls Accurately 107

■ One method of finding and remembering roll settings is to record them on strips of paper and file them for future use. The imprints gained by using a strip of carbon paper between two strips of plain paper leave a picture of the actual distances between the roll bites, a picture which reflects accurately the position of the bites as stock is fed. The author, Maley Chagro, is an experienced mill man.

Sock Size and Wrap Yarns 134

■ At the Chipman-LaCrosse Hosiery Mills, East Flat Rock, N. C., one man spends all his time checking two of the most critical phases of hosiery manufacture—sock sizes and wrap yarns. Management here keeps both those factors on the "critical" list.

In this staff-prepared article, a TI editor visited the plant, secured the information needed, and made a battery of photographs to be used for illustrations.

Since the firm employs the sizer to prevent seconds, he checks the entire sock while he looks at size and wrap yarns—he checks the body yarns, sock length, etc. In case of construction changes, he starts at one end of the plant and works his way through the entire mill. Then, once he finishes the inspection tour he starts on another.

Other aids are used to assure quality, not the least of which is a bulletin board upon which are displayed quality reminders for the benefit of the fixers.

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Photo courtesy Princeton Knitting Mills, Inc., New York, N. Y.

How's this "fur" ingenuity?

Man-made mink is just one of several successful products now made from deep pile fabrics by a leading manufacturer. The reasons for his success are two: First is the long, luxurious, cut-pile of soft, but sturdy, synthetic fibers. And second is the *back-size*, based on a combination of CHEMIGUM LATEX and PLIOVIC LATEX.

The latex backing is important because it provides essential body, pile lock, dimensional stability, flexibility and resistance to raveling. CHEMIGUM LATEX is used because it imparts these properties on a long-term basis, thanks to its excellent resistance to dry cleaning and aging. PLIOVIC LATEX—a vinyl latex—is used, primarily, to control the "hand" of the fabric.

If you are interested in making a pile fabric of outstanding quality, be sure you have the full story on both CHEMIGUM LATEX and PLIOVIC LATEX in back-sizes. It's yours for the asking, including the latest *Tech Book Bulletins*. Write to Goodyear, Chemical Division, Dept. M-9439, Akron 16, Ohio.

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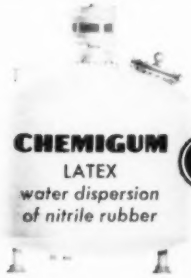

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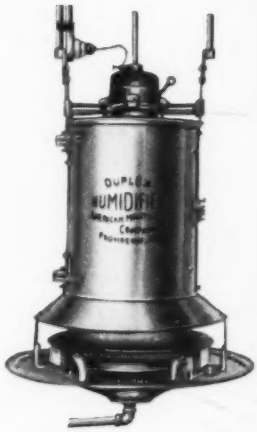
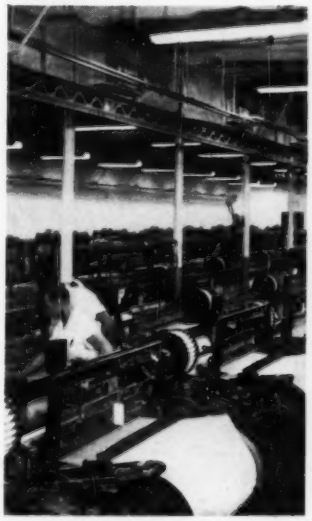
1927

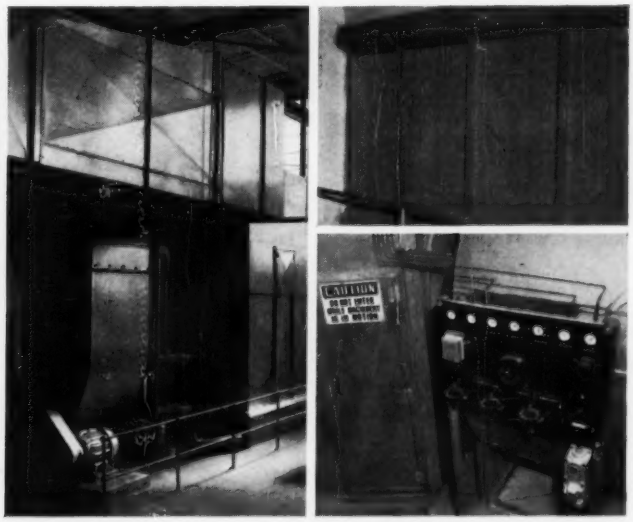


In 1927, Chicopee humidified its Gainesville Cotton Mills with Amco Duplex Humidifiers — high-duty, spray type humidifier with motor-driven fans.

1957



In 1957, *30 years later*, an Amco Dry Duct system was installed in a weave room addition at Walhalla, S.C.



As recently as 1955, Chicopee installed Amco Central Station systems in its Bensenville, Illinois and Milltown, New Jersey plants, where the famous Masslinn Non-Woven Fabrics are produced.

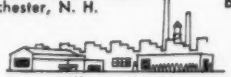
Amco systems installed in Chicopee plants from 1927 to 1957

Chicopee Falls, Mass.

Bensenville, Ill.

Walhalla, S. C.

Manchester, N. H.



Milltown, N. J.

Gainesville, Ga.

Straight Humidification
Bensenville, Ill.; Chicopee Falls, Mass.; Gainesville, Ga.; Manchester, N. H.; Milltown, N. J.

Evaporative Cooling
Chicopee Falls, Mass.; Manchester, N.H.; Walhalla, S. C.

Dry Duct
Walhalla, S. C.

Central Station with Air Washers
Bensenville, Ill.; Milltown, N. J.

Whether your need is for one room or an entire mill, Amco offers air conditioning to meet your requirements. Amco designs and installs all types of systems — humidification; humidification in combination with cooling, as in the ductless evaporative cooling system; unit dry-duct systems; central station systems, with or without refrigeration.

Amco engineers will be glad to advise you on any air conditioning problem — without obligation.

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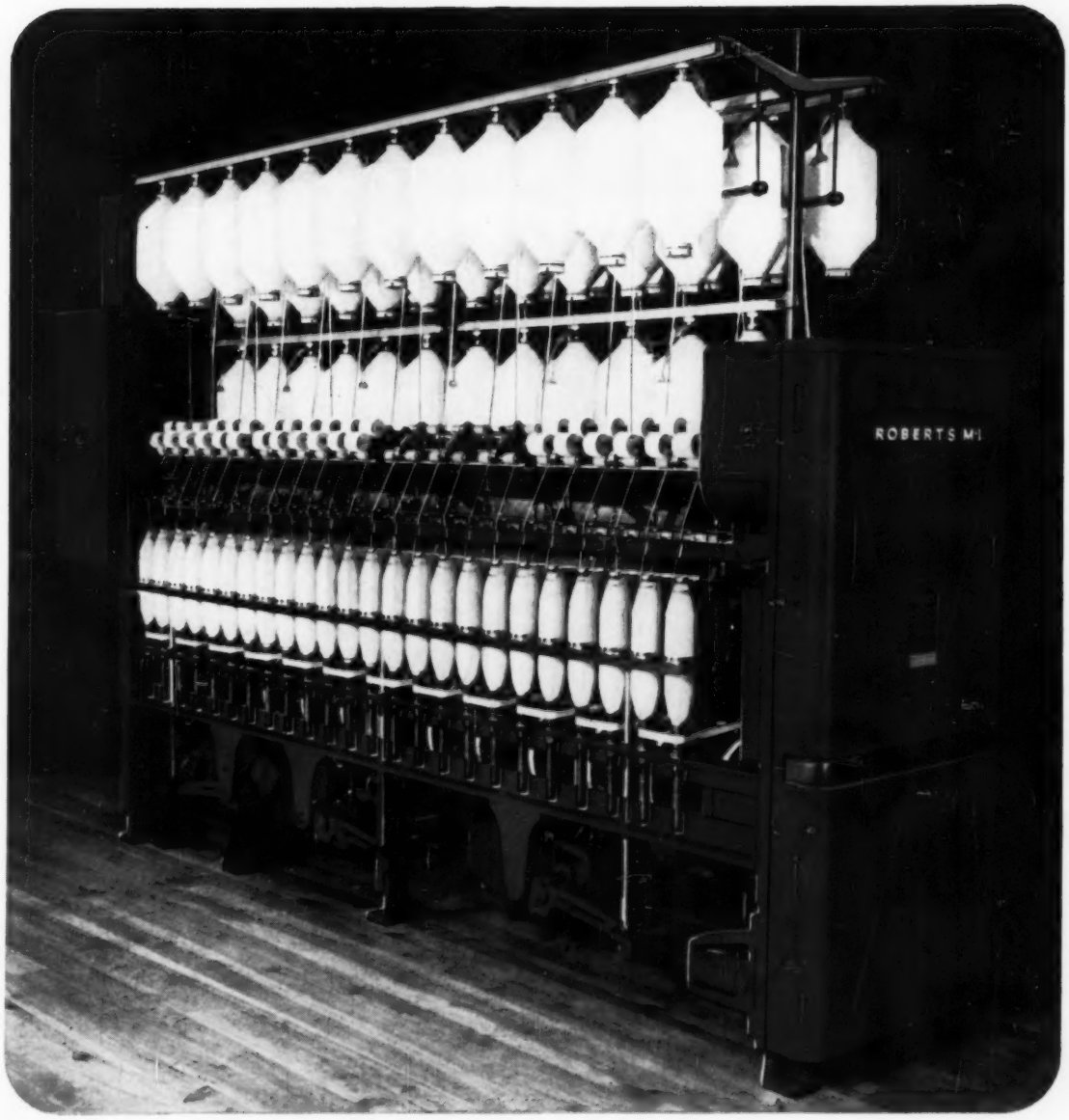


ROBERTS SPINNING

ALL NEW—ALL BALL BEARING ROBERTS M-1 SPINNING FRAME

MODERN IN DESIGN

Into the rugged simplicity of the Roberts M-1 chassis has been built all the ball bearing features needed to provide the smooth operation and productivity for today's and tomorrow's production goals. Standard features include:

- FLEXIBILITY FOR COTTON AND SYNTHETICS
- BALL BEARING TOP ROLL SUSPENSION
- BALLOON CONTROL ARRANGEMENT
- BUILT-IN UnitVac SUCTION CLEANING
- EXTRA CAPACITY SPINDLES
- FULL BALL BEARING HEAD
- 45 DEGREE ROLL STANDS
- LATCH-TYPE BOBBIN HOLDER AEROCREEL
- STEEL BASE RAILS, ROLL BEAMS, RING RAILS
- ADJUSTABLE DRAFT CONSTANT, 500 to 3000
- TURNKEY ERECTION AND STARTUP

PROVEN IN PERFORMANCE

New Roberts Spinning has been running in the mill since February 1956 and has proven itself not only most economical in initial cost but low in maintenance. One large user with more than 200 frames in continuous production reports that the new Roberts Spinning runs with higher front roll speeds, better yarn quality and substantially lower ends down than the several thousand frames of other makes in operation in their mills.

ROBERTS COMPANY

SANFORD, NORTH CAROLINA

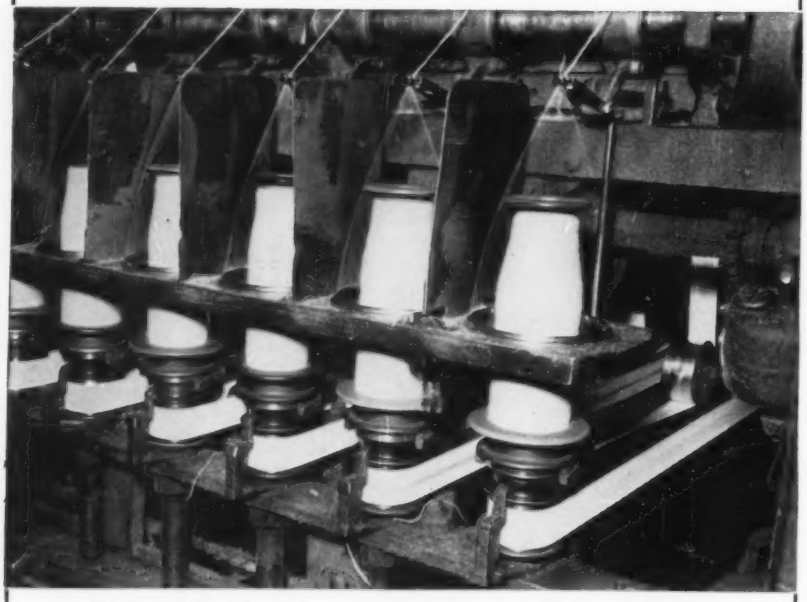
Booth

Originators of STRIP-O-MATIC CARD CLOTHING

FIRST . . . . . STRIP-O-MATIC

SECOND . . . . . SUPR-O-TAPE

Now... SUPR-O-BAND



SUPR-O-BAND, the new banding for spindle drives on spinning, twisting, and roving frames. Promises to be as successful as SUPR-O-TAPE that revolutionized woolen condensing "over night."

ALREADY PROVED by more than a year of rugged mill tests. Note these plus features:

- IMPROVED QUALITY
- LOWER POWER CONSUMPTION
- INCREASED PRODUCTION
- MORE ECONOMICAL

BECAUSE . . . SUPR-O-BANDS Give:

- OPTIMUM SPINDLE SPEED
- LONG LIFE
- UNIFORM TWIST
- MAXIMUM FRICTION—NO SLIPPAGE
- LOWEST COST

SUPR-O-BANDS are lint-free; use belt-hooks or stitching.

- STRIP-O-MATIC CARD CLOTHING
- CONVENTIONAL CARD CLOTHING
- SUPR-O-TAPE FOR CONDENSERS

BENJAMIN BOOTH COMPANY

ALLEGHENY & JANNEY STS., PHILA. 34, PA.

Booth

Shorts and Remnants

By J. C. C.

► Don't shout! Old S&R can hear you. He knows this is the January issue—off with the old; on with the new. He resolves in 1958 to be good to everyone (especially customers) and all that, but Santa Claus comes every month of the year to TI readers and advertisers. And Santa Claus comes to TI for textile information, just as millions (well hundreds anyway) of others. Here's proof:

> "We are manufacturers of upholstered items and also manufacturers of occasional pillows. We are looking for new types of material for complete new lines of occasional pillows. . . . Please send us your latest publication by return mail. . . ."
>
> W. A. KOCH
>
> Santa Claus Land, Inc
> Santa Claus, Ind.

So you see, even Santa Claus comes to TI. But we will say that an occasional pillow is not exactly what S&R's little old heart was longing for Santa to bring. No, sir! He had something more along the lines of a pink Cadillac or Marilyn Monroe. OK—he'll settle for Betty Grable, which brings up the old crack about "What has the guy Harry James got that I haven't?" Of course, the answer is, "Betty Grable."

But you see, in the very same mail with the epistle from St. Nicholas was this one from Syria:

> "We have learned that you are manufacturing in the U.S.A a type of circular looms for the knitting of imitation furs. We want to buy a number of these looms, as well as the finishing machines for finishing these cloths knitted on these circular knitting machines. "
>
> A H. CUTUJIAN
>
> Aleppo, Syria

But then in that same mail, BC Overseas Corp. of Hong Kong wrote for price lists and catalogs of Franz Muller napping machinery as advertised in our October issue. So you

(Continued on page 20)

Only preparation needed is wire brushing. Add water and apply. Pre-Krete is very adhesive and will bond to practically all surfaces.

Plain steel plate will corrode even under normal water conditions.

Ordinary cement linings tend to flake, crack and shrink, resulting in high maintenance costs.

Pre-Krete lined plate is still in perfect condition even after exhaustive testing.

DOUBLE THE LIFE OF CORRODING STEEL VESSELS WITH SPECIAL FORMULA C-17 PRE-KRETE

a lining at a fraction of the replacement cost

Special C-17 Pre-Krete is an exclusive pre-blended hydraulic cement formula, designed to prevent costly corrosion or rust of plain steel vessels, open or closed. Unlike ordinary cement mixtures, Pre-Krete will give long, trouble-free service even under extreme corrosive conditions.

Special Formula C-17 Pre-Krete is chemically inert to most substances—will resist thermal shock, and is unaffected by temperature fluctuations up to 800°F. Pre-Krete is recommended for a wide variety of industrial and process applications that usually require expensive metal linings. Pre-Krete is contamination-free and non-toxic.

Contact Pocono Fabricators for the names of qualified applicators in your area. They will be pleased to give you a free estimate for lining your plain steel vessels on the job-site. For "Do-it-yourself" application, Pre-Krete is available in 95 lb. moisture proof bags. Downtime for lining the average size steel vessel is approximately 48 hours.

Pocono Fabricators, Inc.,
2801 Linton St.,
East Stroudsburg, Pa.

Send for descriptive catalog (No. 1012) including impartial test analysis of Pre-Krete under various simulated service conditions.

- ☐ send name of qualified applicator.
- ☐ please send descriptive catalogs.
- ☐ please send information on "Do-it-yourself" lining.

*Name*_____ *Title*_____

*Company*_____

*Address*_____

*City*_____ *Zone*____ *State*_____

pocono fabricators inc.

Division of The Patterson-Kelley Co., Inc.

East Stroudsburg, Pennsylvania

Parks-Cramer®

Certified Climate® for Textile Mills

Atomizer Humidification

—Gradumatic,® Turbomatic,® GraduVac

Automatic Airchangers®

—dry duct, with direct humidification

Ventilation and Vapor Absorption

Central Station Systems

—air washer type, with or without booster humidification, heating, filtering, refrigeration

Complete new systems, or reorganization of present equipment and capacities

Surveys, Budgets, Proposals

WRITE
for list of recent installations
and how mills have benefited.

Parks-Cramer Company

FITCHBURG, MASS. CHARLOTTE, N. C. ATLANTA, GA.

407

If you're processing man-made fibres, this lubricant will be of tremendous importance to you!

Fibregard

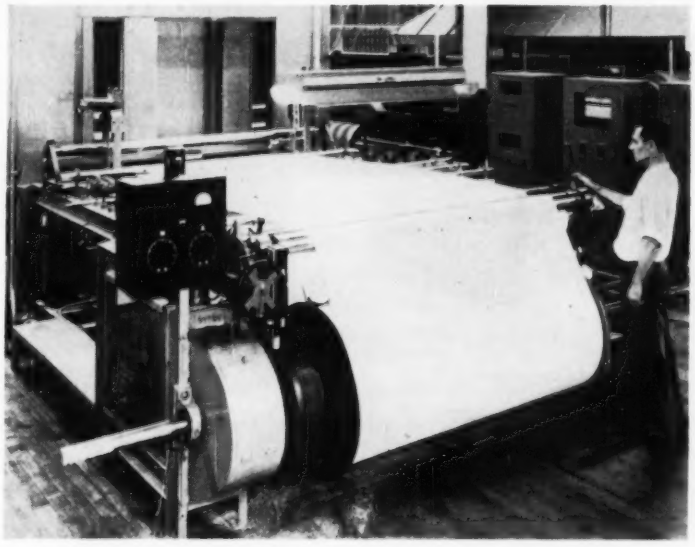
REG. U. S. PAT. OFFICE

The Original Colloidal Lubricant

Unusual fibres, like the synthetics, require an unusual lubricant and such a lubricant is FIBREGARD. This product is the original colloidal lubricant that adheres uniformly to the smooth, glassy surfaces that normally repel moisture and other lubricants.

Nothing like FIBREGARD has ever been made before and no other lubricant on the market can provide the outstanding benefits FIBREGARD provides. This product will be of tremendous importance to you because it:

- **Increases the tensile strength of fibres**
- **Eliminates static and ball-up or gumming during carding**
- **Reduces tension because it provides adequate surface lubrication**
- **Reduces breakage of treated yarns, increases loom efficiency and insures slick warps**
- **Will not discolor white goods or change the shade of dyed goods or fabrics unaffected by plain water or an alkalinity of 8.0**
- **Scours out completely**
- **Eliminates migration**



Only FIBREGARD can do so many jobs so well when used in processing man-made fibres. This original product provides outstanding economies when used as a stock lubricant; as a warp sizer, softener and binder, and as a cone winding lubricant.

These benefits—and many more—are yours when you use FIBREGARD. We will be glad to send you complete technical literature and a free sample so that you can prove our claims on your own equipment. Write, wire or call.

HARRY MILLER CORP.

Original Products & Processes Since 1936

4th & Bristol Streets, Philadelphia 40, Pa.

DAvenport 4-4000

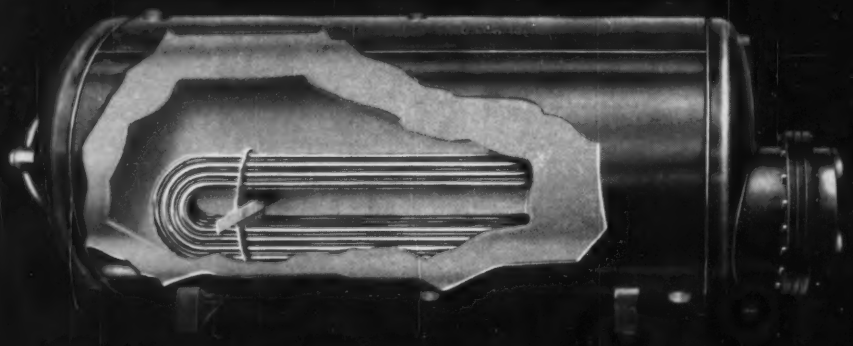
IMMUNOL

Eliminates flammable liquid solvents for cleaning operations in every kind of textile mill. Ask about this important product, too.

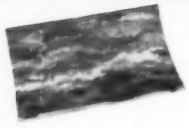
YOU GET

so much more at so little cost

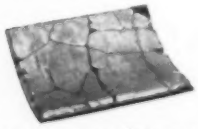
WHEN YOU CHOOSE



Patterson-Kelley cement-lined storage water heaters



Plain steel plate will corrode even under normal water conditions.



Ordinary cement linings tend to flake, crack and shrink, resulting in high maintenance costs.

Pre-Krete lined plate is still in perfect condition after exhaustive testing.

A P-K Pre-Krete* Lined Water Heater gives you double the life of a plain steel heater at only slightly higher first cost.

This long life of rust-free hot water service is made possible because Pre-Krete is a special pre-blended low soluble hydraulic cement formula. This durable lining is unaffected by extreme temperature changes, resists thermal shock and will not shrink, flake or crack.

Not only is your initial cost little more than for plain steel, but maintenance costs are appreciably lower. If lining repairs are ever needed, one man can make them quickly with a minimum of down time.

Moreover, Pre-Krete is inert to most substances and cannot contaminate the water or cause rust damage to fabrics.

Best of all, with a P-K Pre-Krete Lined Heater you get thermal designing that has maintained an unexcelled reputation for over 75 years, plus advanced fabrication techniques that meet all ASME specifications.

For complete details, write for Catalog 19 on P-K Storage Water Heaters. For information on field lining your existing plain steel vessels with Pre-Krete, ask for Bulletin 1012. The Patterson-Kelley Co., Inc., 2801 Warren St., East Stroudsburg. Pa. IN

*Pre-Krete is a registered name

Patterson Kelley

storage water heaters • instantaneous heaters • convertors • fuel oil heaters • freon chillers and condensers

NOW!

Southern DURAMOLD Shuttles

For Multiple-Box Looms

Illustration of C. & K. W-3 Loom courtesy of Crompton & Knowles Corporation

Last 3 to 4 Times As Long As Wood

Rugged DURAMOLD shuttles, the most versatile and durable molded plastic shuttles on the market, have a phenomenal performance record in numerous large scale applications. NOW THEY ARE AVAILABLE FOR C. & K. MULTIPLE-BOX LOOMS.

Most important advantages of DURAMOLD shuttles in multiple-box weaving are:

1. **The weight of all DURAMOLD shuttles of given specifications is always exactly the same.**
2. **The additional weight of DURAMOLD shuttles is particularly beneficial in these heavier, wider looms.**
3. **The shuttle width can be closely matched and held.**
4. **DURAMOLD shuttles are completely unaffected by atmospheric conditions—humidity will not cause any size changes, swelling or contracting.**
5. **Molded from remarkably strong, grainless Westinghouse Micarta, there is no splitting or splintering, and premature failures are practically eliminated.**

Only Southern's exclusive molding and manufacturing methods permit greater versatility of construction to meet your EXACT requirements, such as tip location, eye location, chamber length, shuttle width, etc.

REDUCE YOUR SHUTTLE COSTS NOW BY USING SOUTHERN DURAMOLD SHUTTLES
Ask your Steel Heddle Sales Engineer for complete details.

TEMPERED — QUALITY Stehedco CONTROL — STEHIDE

Other Plants and Offices: Granby, Quebec, Canada • Lawrence, Mass. • Greensboro, N.C. • Atlanta, Ga. • Textile Supply Co., Dallas, Texas • Albert R. Breen, Chicago, Ill.

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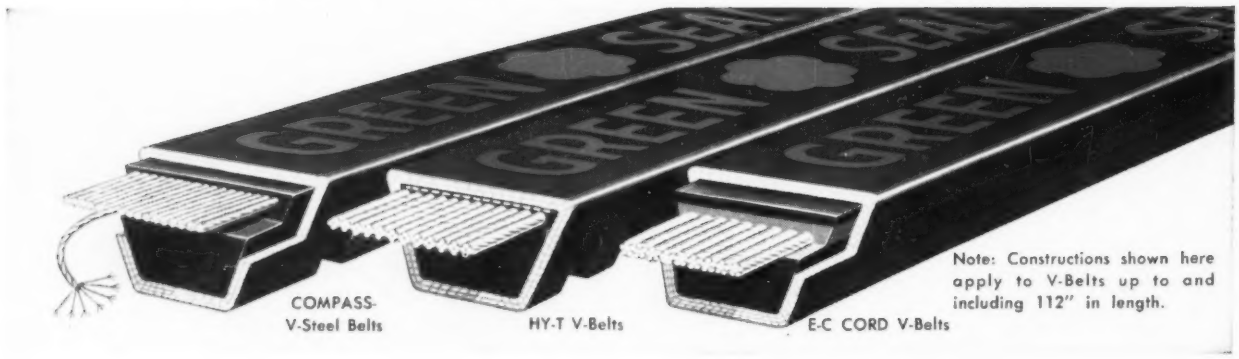
STEEL HEDDLE MFG. CO.
PHILADELPHIA 32, PA.
SOUTHERN SHUTTLE DIV.
GREENVILLE, S.C.
Southern

S-5729

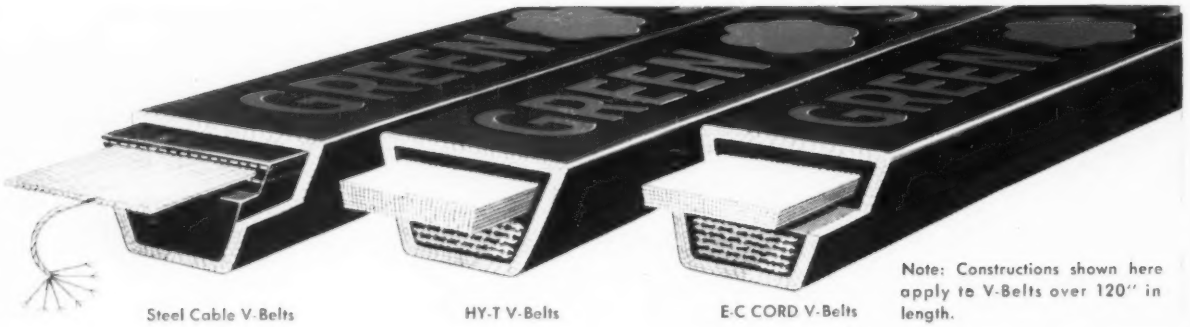
What's different about



COMPASS-V-Steel Belts | HY-T V-Belts | E-C CORD V-Belts

Note: Constructions shown here apply to V-Belts up to and including 112" in length.

V-Belts with the Green Seal?



Steel Cable V-Belts | HY-T V-Belts | E-C CORD V-Belts

Note: Constructions shown here apply to V-Belts over 120" in length.

Plenty—when you're belting multiple drives. For that Green Seal certifies the dimensional stability of every belt that carries it. There's no surer guarantee that every belt in a set will match every other one—perfectly. And that they'll *stay* matched no matter how long you stock them before installation.

So the dimensional stability of Green Seal belts is solid protection against "loafing," slipping, stretching, scorching and other mismatching troubles. And most of the credit belongs to the belts' load carriers of airplane-type steel cables or Triple-Tempered (3-T) cord – Goodyear "exclusive" cord that's carefully tempered with Tension, Temperature and Time.

This unique 3-T process brings the synthetic cord to its point of greatest strength and stability. Result: the end of shrinkage in storage—plus greatest shock- and stretch-resistance in use. All of which assures you maximum, trouble-free horsepower hours at minimum cost. Why settle for less?

DIMENSIONALLY STABLE V-BELTS with the GREEN SEAL by

GOODYEAR

THE GREATEST NAME IN RUBBER

The Goodyear Tire & Rubber Company, Dept. 794, Akron 16, Ohio

Please send me complete information on what makes V-Belts with the Green Seal different from any others made today.

Name_____

Company_____

Street Address_____

City_____ Zone_____ State_____

Compass, E-C Cord, Hy-T, Green Seal—T. M.'s The Goodyear Tire & Rubber Company, Akron, Ohio

it's a woman's world...in color!

Growing recognition of the tremendous feminine influence in consumer buying is nowhere more dramatically shown than in the display of color everywhere about us.

Today, more than ever, color is essential to sound merchandising.

National Aniline has long been a leader in color technology . . . in textiles as in many other areas where color has *always* been important. Our development research and unexcelled technical service facilities are continually expanding to keep our dyes and knowledge of application techniques abreast of rapidly evolving needs.

We invite you to make full use of our services.

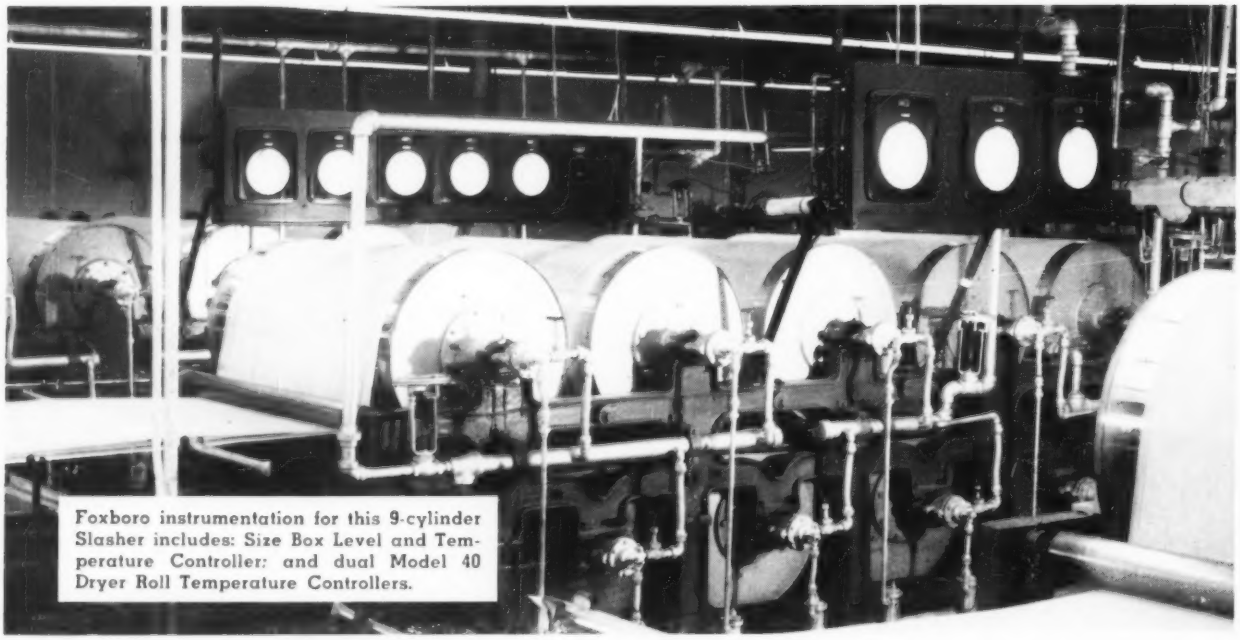
Gown by Rosalie Macrini

Allied Chemical

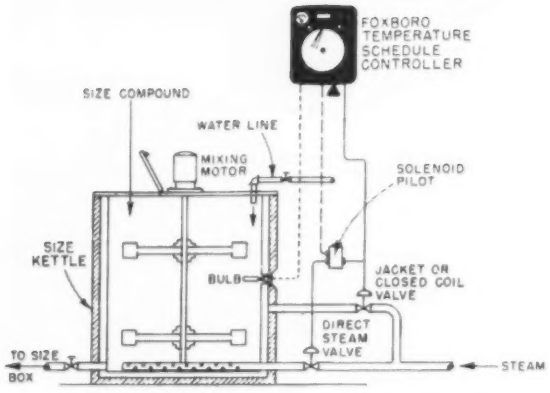
NATIONAL ANILINE DIVISION ALLIED CHEMICAL & DYE CORPORATION • 40 RECTOR ST. NEW YORK 6, N. Y

Akron Atlanta Boston Charlotte Chattanooga Chicago Greensboro Los Angeles New Orleans Philadelphia Portland, Ore. Providence San Francisco Toronto

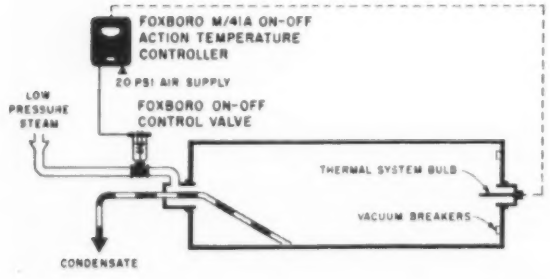
FOXBORO AUTOMATES THE SLASHER ROOM!



Foxboro instrumentation for this 9-cylinder Slasher includes: Size Box Level and Temperature Controller: and dual Model 40 Dryer Roll Temperature Controllers.



Foxboro Dual-Purpose Size-Kettle Control



Foxboro On-Off Control System for Dryer Rolls

complete control system:

- **cooks – stores size at proper temperatures – automatically**
- **holds dryer roll temperatures constant – automatically**
- **maintains pneumatic loading of squeeze rolls – automatically**

From size box to dryer roll you can depend on Foxboro control to increase the efficiency of your Slasher operation.

Take Foxboro's Dual-Purpose Size-Kettle Temperature Schedule Controller, for example. This exclusive instrument controls the temperature of BOTH size cooking and storage — with direct steam and jacket heating. Temperature shifts are automatic — no hazards of boil-over. And size dilution is completely eliminated — regardless of storage time.

Or take Foxboro Dryer Roll Temperature Control. This simple, on-off system developed by Foxboro eliminates compressed air purge in the removal of steam condensate . . . even as low as 140 F!

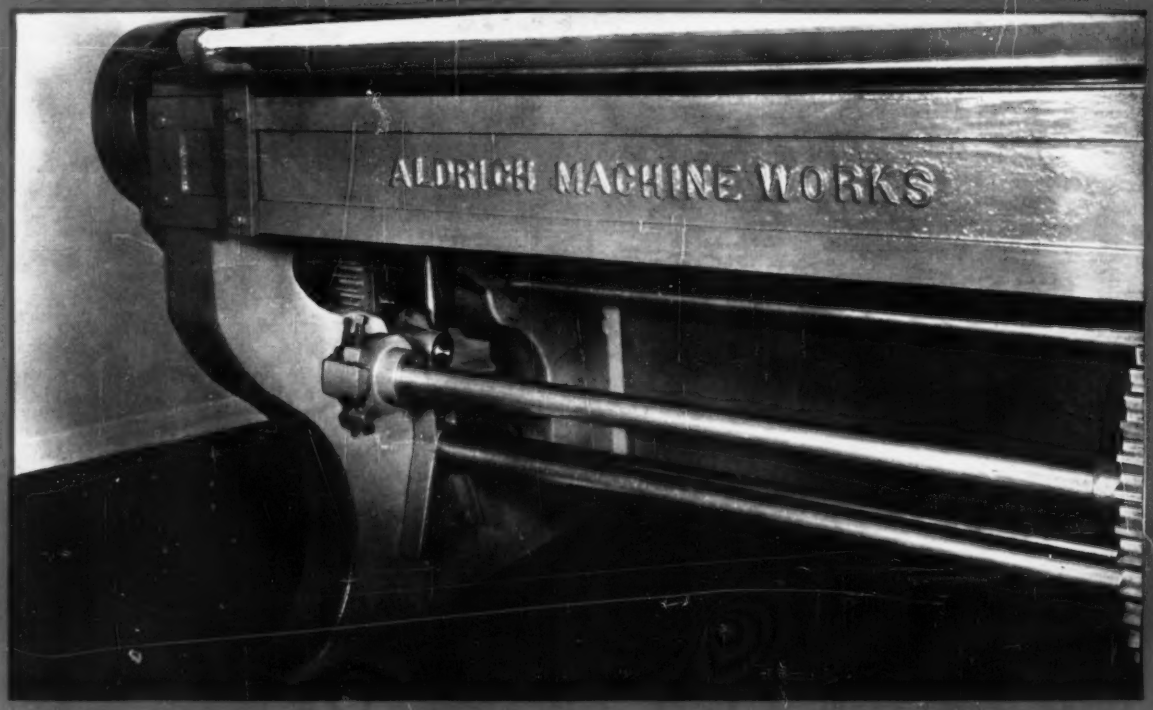
And for over-all Slasher Room efficiency, don't overlook size box level control, viscosity recording, and pneumatic squeeze roll loading. These, too, are Foxboro-engineered to improve yarn quality . . . automatically. Write today for full details. **The Foxboro Company, 481 Neponset Ave., Foxboro, Mass., U.S.A.**

FOXBORO **SLASHER ROOM CONTROL**

REG. U.S. PAT. OFF.

Need New Pickers?

. . . then, think of what you get in ALDRICH PICKERS!



As long as there have been pickers, there has been trouble with the shoes that hold the calender rack gears in mesh with their spur gears on the cross-shaft.

These shoes are not on the Aldrich calender. The roller, pictured above, running on an Oilite bushing and attached to a mounting pivoted on a stationary shaft in the calender, holds the calender rack gear exactly in place without any possibility of binding or jamming.

Furthermore, to make sure that the cross-shaft can't stick in a dry bearing, this shaft is mounted on ball bearings, which are permanently lubricated.

This is one of the many improvements in the Aldrich picker which eliminate trouble and help to make better laps.

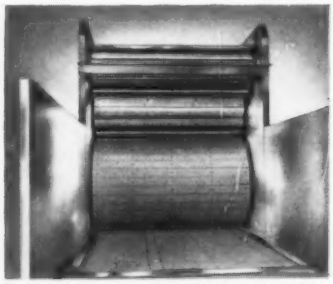
AldricH MachinE WorkS

Greenwood, South Carolina

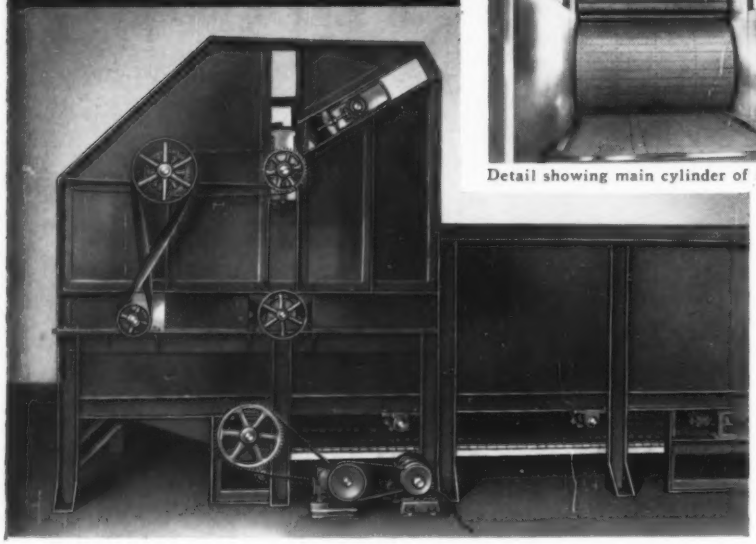
from Opening Room to Dye House

NOW! SMOOTHER OPERATION THAN YOU'D EVER DREAMED POSSIBLE

SARGENT'S



Detail showing main cylinder of opener



NEW HEAVY DUTY OPENER

with Rotary Evener and Stripper

delivers to the next succeeding process a more open, lofty fibre than ever possible with conventional-design openers.

Rotary drives replace the usual oscillating movement of evener and stripper rolls . . . exceptionally rugged construction insures less maintenance, longer life, reliable production quality of 2000 to 3000 pounds per hour . . . no feed rolls hold fibre while being picked, resulting in semi-combing action and fewer neps at the card . . . rolls adjusted to intermesh pins, providing continuous stripping . . .

From opening heavy grease wools for better picking and cleaning, to opening compacted dyed fibres — natural or synthetic — for better drying, here's a really modern-design opener to guarantee a superlative job.

Want more information? Write your nearest representative or write us direct. And ask for Bulletin No. 202.

C. G. SARGENT'S SONS CORPORATION

Graniteville, SINCE 1852 Massachusetts

PHILADELPHIA 19 — F. E. Wasson, 519 Murdock Road
CINCINNATI 15 — A. L. Merrifield, 730 Brooks Avenue
CHARLOTTE, N.C. — W. S. Anderson, Carolina Specialty Co.
ATLANTA, GA. — J. R. Angel, Mortgage Guarantee Building
TORONTO, CAN. — Hugh Williams, 47 Colborne Street

Shorts and Remnants

(Continued from page 10)

see, it's a small world after all with inquiries from the North Pole, the Far East, and farther East for dope on occasional pillows, imitation fur machinery, and nappers made in Germany. You can't beat old TI.

► While we are on the subject, old S&R will bet you a million dollars that you don't know why there are no more woxes, that is, if you didn't open one of those crazy books for the kids under the Christmas tree and read something like this:

"There was a wolf
and there was a fox.
They ate each other up
and that made the wox.
Then the wox ate himself up
That's why there are no more woxes"

And, in case you are interested, that was in "I'll Be You and You Be Me" by Ruth Kraus, and it's a good idea.

► **Earl A. Palmatier,** Mohasco Industries, Amsterdam, N. Y., is another reader who liked the "Man-Made Fibers" section in Sept. '57. He wrote for further data on "Flaikona" and "Nub-Lite" yarns mentioned there.

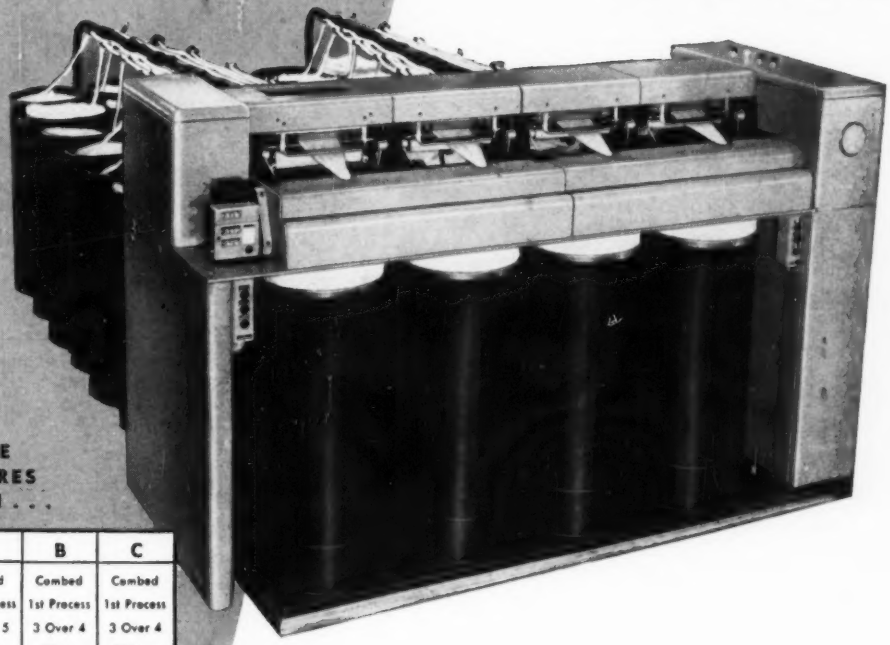
It looks as if about the only folks that haven't requested reprints of that special section are the National Cotton Council, American Cotton Manufacturers Institute, the National Association of Wool Manufacturers, and the silk folks. Maybe some of them did, and the editors wouldn't tell us about it.

Anyway, about everybody but the wool folks seem to be getting together, with the merger of the American Cotton Manufacturers Institute and National Federation of Textiles.

There are still a few reprints available if you missed this issue. Look for the special treatment on synthetics in August '58.

Among those requesting reprints and sending compliments on Sept. '57 issue were: **Gerardo Pozas,** Hilados del Norte S.A., Monterrey, Mex.; **Courtaulds (Can.) Ltd.,** Montreal; **J. B. Baldore,** Res. Dept., Hercules Powder Co., Wilmington, Del.; **John D. Harms,** American Air Filter Co., Inc., Louisville, Ky.; **A. M. Tenney,** V. P., Eastman Chem. Products, Inc., N. Y.; **Richard T. Kropf,** V. P., Belding Heminway Co., Inc., N. Y.; **T. Kimoto,** Kanegafuchi Spinning Co., Ltd.,

Production- KEY TO PROFITABLE OPERATION



COMPARE THESE PRODUCTION FIGURES WITH YOUR OWN . . .

Mill	A	A	B	C
Stock	Carded	Carded	Combed	Combed
Process	1st Process	2nd Process	1st Process	1st Process
Model Versamatic	4 Over 5	4 Over 5	3 Over 4	3 Over 4
Sliver Fed	52.5 gr.	54 gr.	55 gr.	120 gr.
Ends Up	8	8	8	4
Speed	264 ft./min.	264 ft./min	260 ft./min	216 ft./min.
Sliver Delivered	54 gr.	56 gr.	55 gr.	60 gr.
Tester	Saco-Lowell	Saco-Lowell	Saco-Lowell	Brush
Variation	18%—19%	18%—19%	10%—13%	14%—16%
Efficiency	92%—95%	92%—95%		
Deliveries	16	16	60	32
Deliveries/Operator	32	32	30	32
Can Size—Back	15" x 42"	15" x 42"	15" x 36"	
Can Size—Front	15" x 42"	15" x 42"	15" x 36"	14" x 36"
Yards/Can	3800 yds.	3875 yds.	3300 yds.	2850 yds.
Pounds/Can	29.3 lbs.	31.0 lbs.	25.9 lbs.	24.4 lbs.
Draft	7.77	7.71	8.03	8.03
Pounds/Man Hour	1250 lbs.	1270 lbs.	1105 lbs.	1070 lbs.

Versamatic DRAWING FRAMES *by* SACO-LOWELL

GIVE HIGHEST PRODUCTION OF QUALITY SLIVER BY EVERY STANDARD — PER DELIVERY — PER MAN HOUR — PER HORSEPOWER — PER SQUARE FOOT OF FLOOR SPACE.

For complete information and a demonstration — call your nearest Saco-Lowell office.

SACO-LOWELL SHOPS

60 BATTERYMARCH STREET, BOSTON 10, MASS

Shops at BIDDEFORD & SACO, MAINE, SANFORD, N.C., EASLEY, S.C. Sales Offices: CHARLOTTE · GREENSBORO · GREENVILLE · ATLANTA

SOUTHERN STATES CD-2 CARD DRIVE COMBINES INTO ONE UNIT ALL OF THE FEATURES WANTED FOR COTTON CARDS

Here is why we honestly believe the Southern States CD-2 Card Drive is the safest, simplest, most efficient individual drive on the market today:

Finger-tip control. No changes in operating procedure. Unit is controlled by simple clutch lever in both starting and hand stripping.

Full speed in seconds. A 1½ hp high torque card motor brings card into full operation, seconds after clutch is engaged.

Safety engineered. All belts and moving parts are covered. Starting and idling is accomplished by simple clutch lever.

Rugged construction. The entire unit is built for heavy-duty service: steel main stand; cast iron jackshaft bracket and main pulley; cast aluminum cover. Ball bearing throughout.

Easy installation. Fits any cotton card. Minimum number of holes to drill in frame. Drive pulley, collar and clutch are preassembled and slip on to shaft using existing keyway.

Get the facts from your Southern States representative or write for Bulletin 301-a.

SOUTHERN STATES
EQUIPMENT CORP.
HAMPTON, GEORGIA

Shorts and Remnants

Osaka, Japan; T.M.M. Ltd., Rossendale, Lancs, Eng.; **Crowell Dean,** A. E. Staley Mfg. Co., Decatur, Ill.; **Raymond A. All,** Asst. V. P., Textile Div., U. S. Rubber Co., N. Y.; **Vasser Woolley,** Seydel-Woolley & Co., Atlanta, Ga.; **Celanese Corp. of America,** Charlotte, N. C.; **George E. Smith, Jr.,** Gen. Mgr., Great Falls Bleachery & Dye Works, Inc., Somersworth, N. H.; **John W. Ogletree,** V. P., Polymer Industries, Inc., Springdale, Conn.; **J. A. Pinatel, Jr.,** Pinatel Piece Dye Works, Ltd., Joliette, Que., Can.; **J. C. Whitwill,** Supt. Brantford Cordage Co., Ltd., Brantford, Can.; **E. Reid,** Pur. Agt., Heminway & Bartlett Mfg. Co., Watertown, Conn.; **F. A. Decker,** American Viscose Corp., Parkersburg, W. Va.; **Ralph L. Bullock,** Dir. Res. Drycor Felt Co., Staffordville, Conn.; **J. H. Clasgens, II,** J. H. Clasgens Co., New Richmond, Ohio; **Phil Moran,** H. Warshow & Sons, Inc., Milton, Pa.; **E. Lalibertz,** Liberty Textile, Pawtucket, R. I.; **Arnold Willis,** Pres., United Felt Co., Chicago, Ill.; **E. A. Wolff,** Bauer & Black, Chicago, Ill.; **Arnold Freedman,** Synthetic Thread Corp., Bethlehem, Pa.; **A. M. Newell,** Hartford Machine Screw Co., Greenville, S. C.; **J. Gibbons,** David Clark Co., Worcester, Mass.; **F. T. Spencer,** Pepperell Mfg. Co., Biddeford, Me.; **Canadian Chemical & Cellulose Co., Ltd.,** Montreal, Que., Canada.

In addition to the above list, comments came from textile schools such as **Clemson, Auburn, Lowell, New Bedford,** and **Ga. Tech.** Inquiries also included requests from **Textile Research Institute,** Princeton, N. J.; **Institute of Textile Technology,** Charlottesville, Va.; **Mill Haven Research Lab., Canadian Industries Ltd.,** Kingston, Ont., Can.; **U. S. Tariff Commission,** Washington, D. C., **Carol Book Shop,** Newport News, Va.; and **AATCC Research,** Lowell, Mass.

► "Pound Foolish" on textile marketing and pricing inconsistencies got reprinted in the fall issue of "The Bobbin and Beaker" of Clemson (S. C.) School of Textiles (nice publication, too). And "Kendall Builds Managers" (Oct. '57) was abstracted in the Harvard Business School's "The Executive—A Guide to Reading for Top Management." (They could do some abstracting of that name.) So you see, TI gets around the best colleges.

In fact, **Ann Whitcomb,** a junior

Clinton®

starches keep production "ON COURSE"

For smooth sailing in the weave-room, use Clinton starches on every warp-sizing job. They're easily prepared and applied — maintain proper consistency through a wide temperature range. By reducing friction and increasing warp strength, Clinton starches step up weaving efficiency — help keep production runs on schedule.

The finishing operation, too, calls for Clinton's consistently high quality. Clinton has what it takes to give your textiles the "hand" and body that sells. In every mill operation calling for a quality starch product, it pays to set your course with Clinton.

. . . and remember *technical service in connection with your specific problems is available without obligation*

Quality products

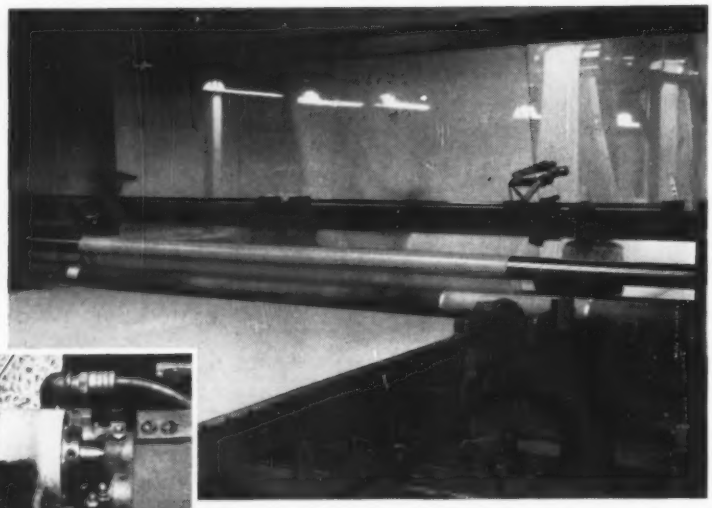
FROM THE WORLD'S CORN CENTER

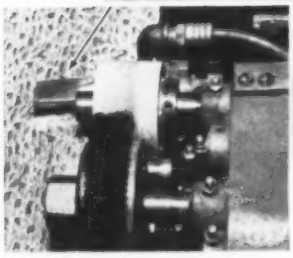
CLINTON

CLINTON CORN PROCESSING COMPANY
CLINTON, IOWA

Askania Regulator Company NEWS

AUTOMATIC CLOTH GUIDES FOR TENTER FRAMES, TENTER BATCHERS, LABEL MARKERS, TUBERS AND EXAMINERS





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ASKANIA REGULATOR COMPANY

"CONTROLS FOR INDUSTRY"

Hydraulic, Electrohydraulic and Electronic Controls—
Valve Actuators and Cylinders—General System Engineering

A SUBSIDIARY OF
GENERAL PRECISION EQUIPMENT CORPORATION

GPE

Shorts and Remnants

textiles major at the Univ. of Vermont wants information on the aims and goals of textile testing; the general methods of chemical and physical testing; any recent innovations or discoveries of importance. That's a lot of testing. If she comes up with all of that, she will be a fine girl for some mill research dept.

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(Continued on page 30)

SONOCO tubes are "Job-Rated" for every textile need!

Sonoco "job-rated" paper tubes for the textile industry are the result of nearly 60 years' research and experience. Sonoco manufactures or can design a tube best suited to your particular need. This eliminates expensive guesswork and greatly reduces downtime.

Sonoco tubes are made from paper manufactured by Sonoco. Strict quality controls are maintained throughout the entire manufacturing and converting processes. This is one of several reasons why Sonoco does a better job of supplying tubes to meet your requirements. Special surface finishes and tube-end treatments are available to meet specific problems in winding, twisting, creeling and related operations.

Use Sonoco "job-rated" tubes for efficiency and better production.

SONOCO
SERVES THE WORLD
PAPER CARRIERS
REG. U.S. PAT. OFF.

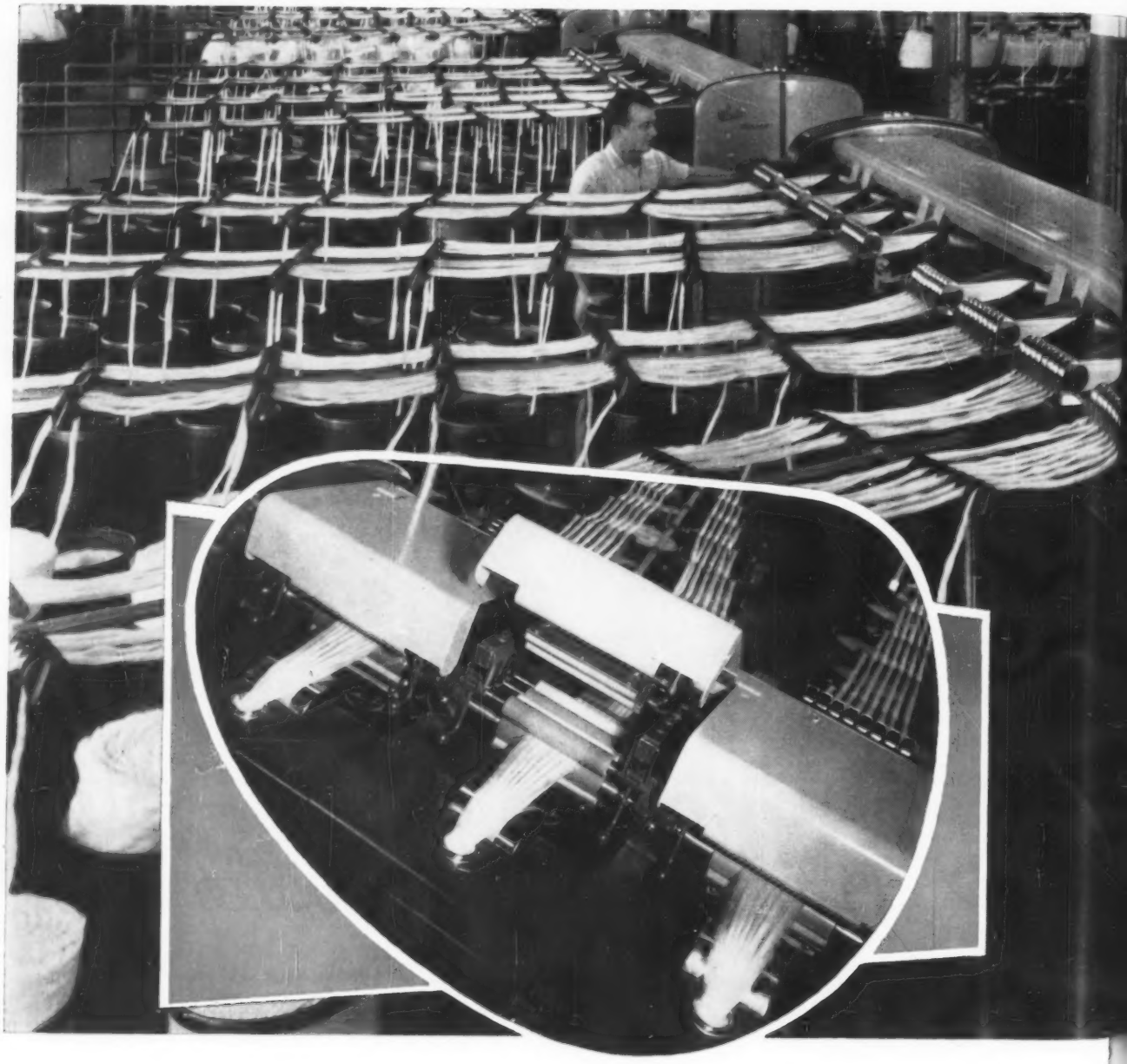
SONOCO PRODUCTS COMPANY

MAIN OFFICE — HARTSVILLE, S. C.

MYSTIC, CONN. • AKRON, IND. • LOWELL, MASS. • PHILLIPSBURG, N. J.
LONGVIEW, TEXAS • PHILADELPHIA, PA. • LA PUENTE, CAL.
GRANBY, QUEBEC • BRANTFORD, ONT. • MEXICO, D. F.

1022

From a practical viewpoint...WHITIN



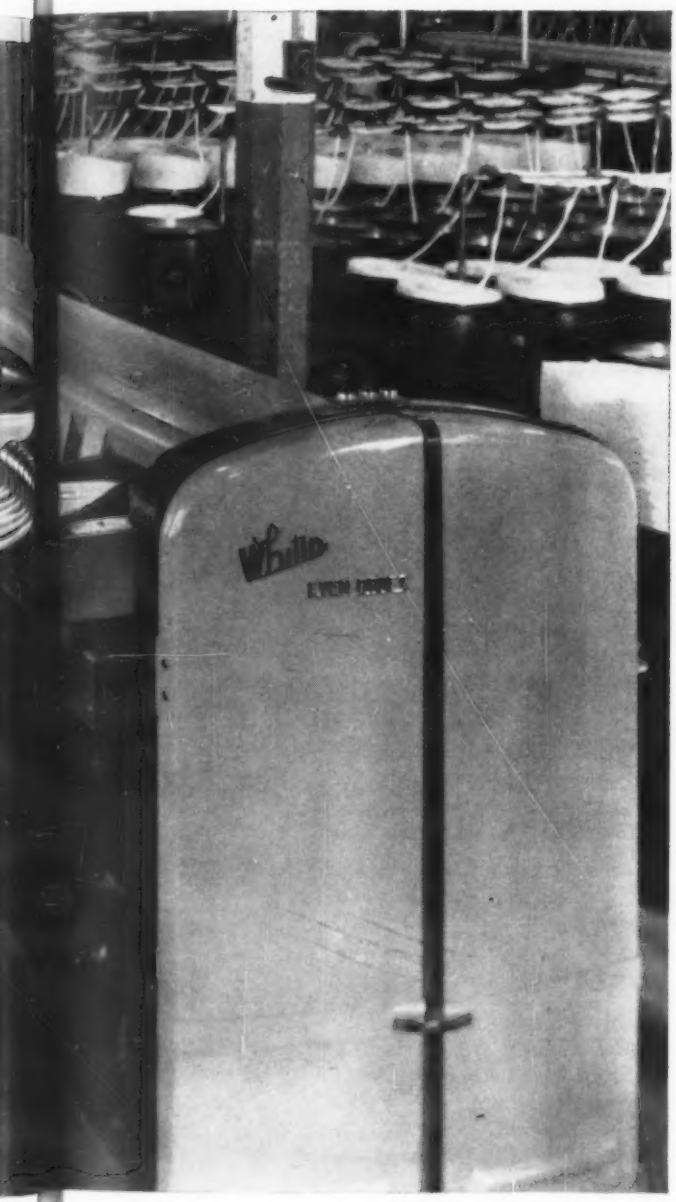
The Whitin EVEN-DRAFT* drawing frame with its unique Pneuma-Clear waste removal unit has been installed and sucessfully operating in scores of mills. It has now been proven the first practical high speed drawing frame, outperforming all others. Users report up to triple production, sliver more even than ever produced before, costs reduced up to 50%, plus many other advantages in subsequent processing, in yarn and fabric quality.

EVEN-DRAFT* DRAWING

is your best buy . . .

Because

It is unequalled for production, evenness of sliver, running cleanliness, efficiency and lowest operating cost.



Unretouched photo of 80 delivery installation of Whitin EVEN-DRAFT drawing frames. Note extreme cleanliness of machines and area.

You get **ALL** these advantages with Whitin **EVEN-DRAFT DRAWING**

- **Runs up to 300 feet per minute — On all fibers up to 3" — depending upon mill conditions and production needs**
- **Cleanliness — Clearer waste and fly efficiently removed by Pneuma-Clear units on each delivery — an indispensable essential to satisfactory operation — available only on WHITIN EVEN-DRAFT.**
- **Four over Five drafting units — no rolls to remove or replace, simple to set**
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- **Advanced design — Two independent four-delivery heads, heavy vibration proof precision construction, overarm weighting, electronic stop motions and signal lights; 14" - 15" - 16" cans, 36" or 42" high.**

A specific example, based on actual operating conditions in the production of high quality print cloth 80 x 80, 39", 4.00 yds./lb., 31's warp, 41's filling, 162,190 lbs. per 144 hrs.

	Breaker	Finisher
No. deliveries	32	32
Sliver fed., grs.	55	55
No. slivers	6	6
Sliver del., grs.	55	60
F.P.M.	300	300
Efficiency	80%	80%
Prod./lbs./hr.	302	329
Prod./144/hrs.	43488	47376
Operators	1	1
Direct labor cost per lb. for drawing (based on cloth prod.)		**$.00234**

TRADE MARK*

Whitin MACHINE WORKS

WHITINSVILLE, MASSACHUSETTS

CHARLOTTE, N. C. • GREENSBORO, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.

NOT JUST A NEW AIR CONDITIONING UNIT

but the basis for an entirely new system —Carrier Rotaspray Weathermaker!

Again, from Carrier, comes another major advance in air conditioning. Far more than a new unit, the Carrier high-velocity Rotaspray Weathermaker* introduces a revolutionary new system for humidifying, dehumidifying, air cleaning and precise control of temperature and humidity.

Saturation and control of air at the higher velocity used in this major development represent a long sought-for engineering achievement. Field-tested for more than a year, the system offers proved advantages to new and existing mills. For example:

Lower construction costs—substantially lower than conventional systems because need for an apparatus tower is eliminated. The new Rotaspray Weathermaker is small, compact, light. Can be hung from the ceiling, put outside on the roof or suspended outside on the wall.

Lower maintenance costs—substantially lower than conventional systems. The new Rotaspray Weathermaker, equipped with "Cant-Clog" nozzles, is self-cleaning. Needs no air filters. Requires no recirculating pumps. Uses a centrally located water make-up tank and lint strainer and a specially designed axial-flow fan.

Lower operating weight, less space—substantially lighter and more compact than conventional units. See diagram for comparison.

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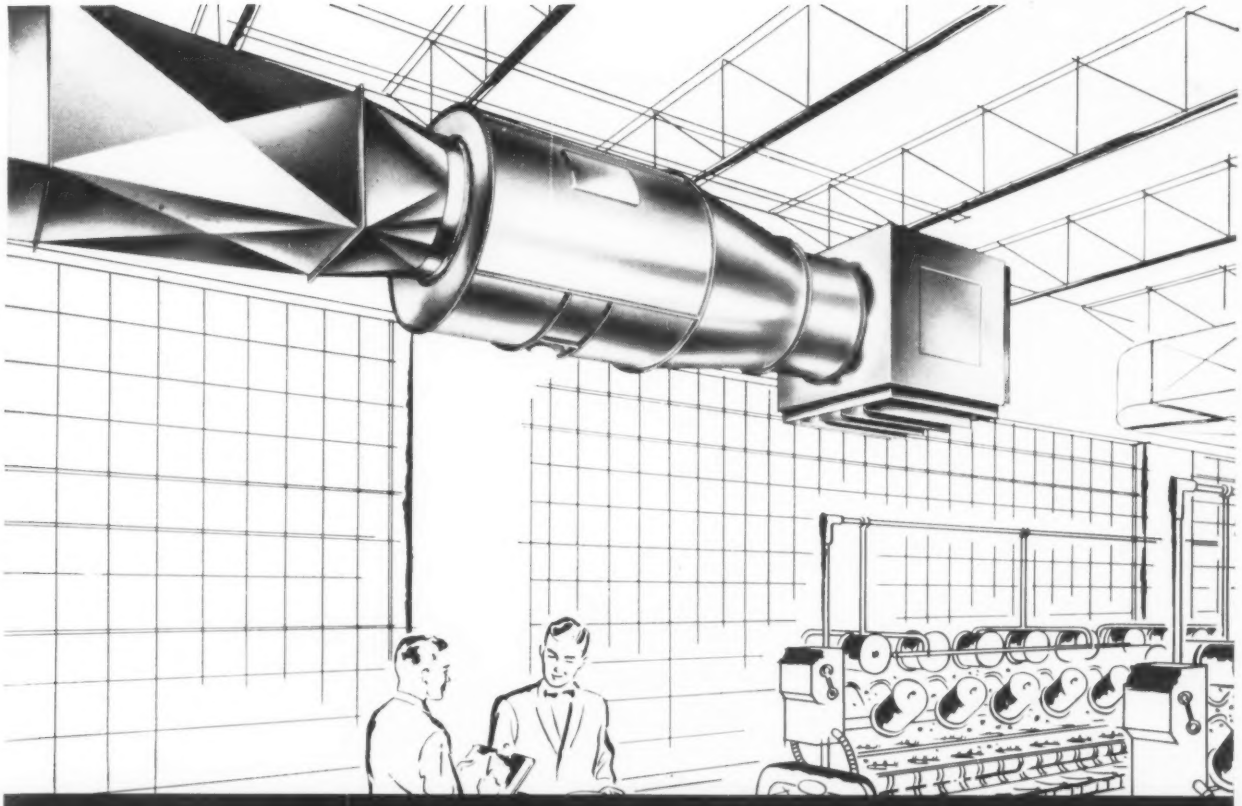

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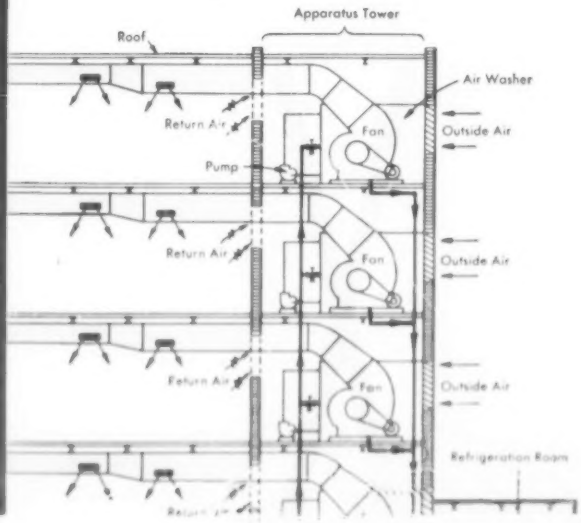
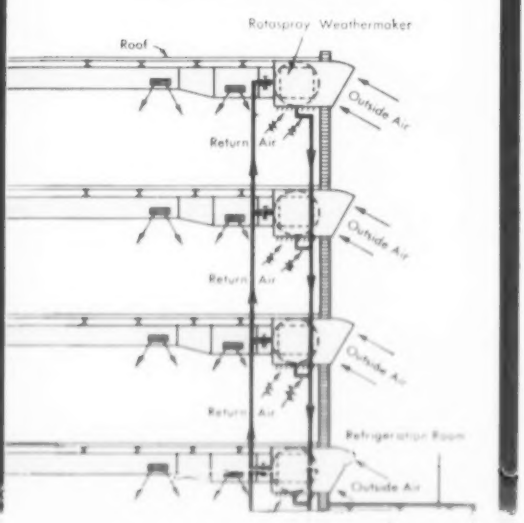
Conventional Central Station System with apparatus tower



New Carrier Rotaspray System without apparatus tower



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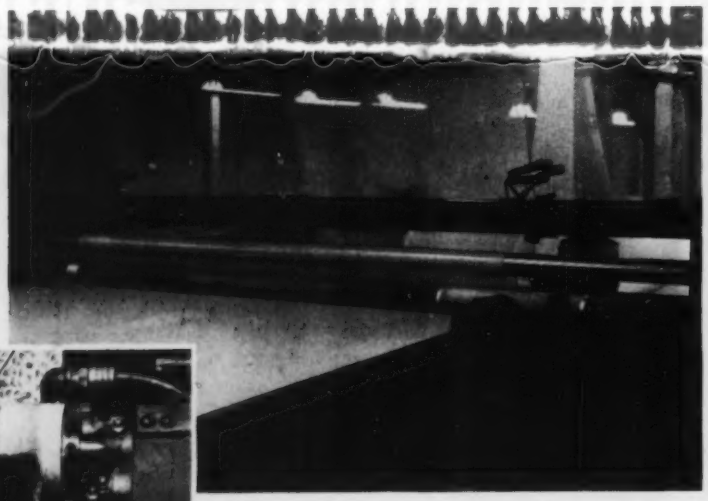

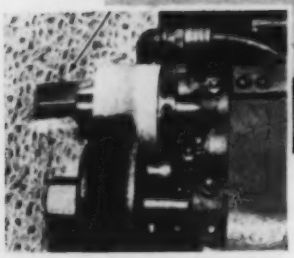

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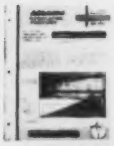

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GPE

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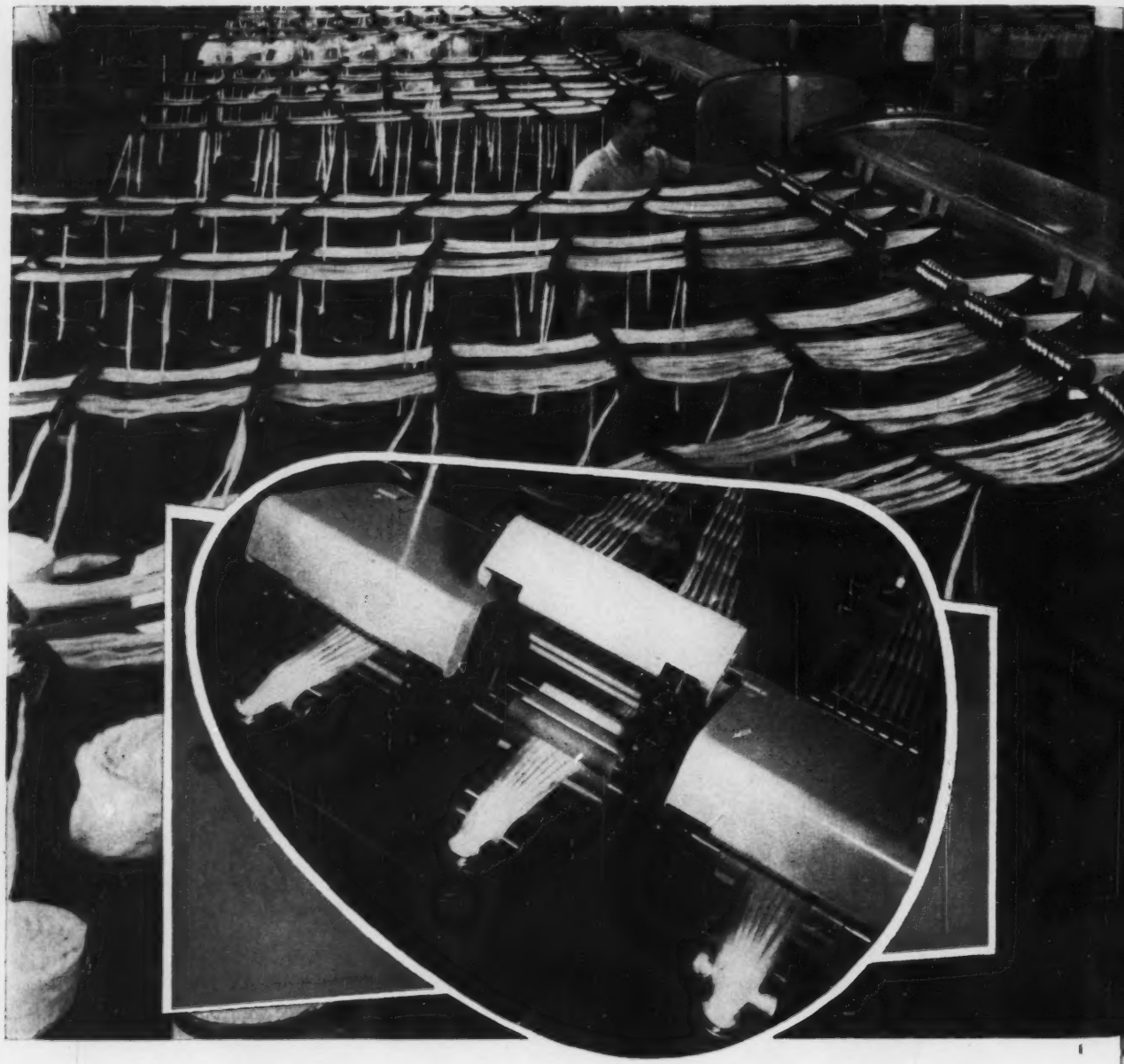
1022

For further information use Handy Return Card, Page 165

From a practical viewpoint... WHITIN



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TRADE MARK*

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CHARLOTTE, N. C. • GREENSBORO, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.

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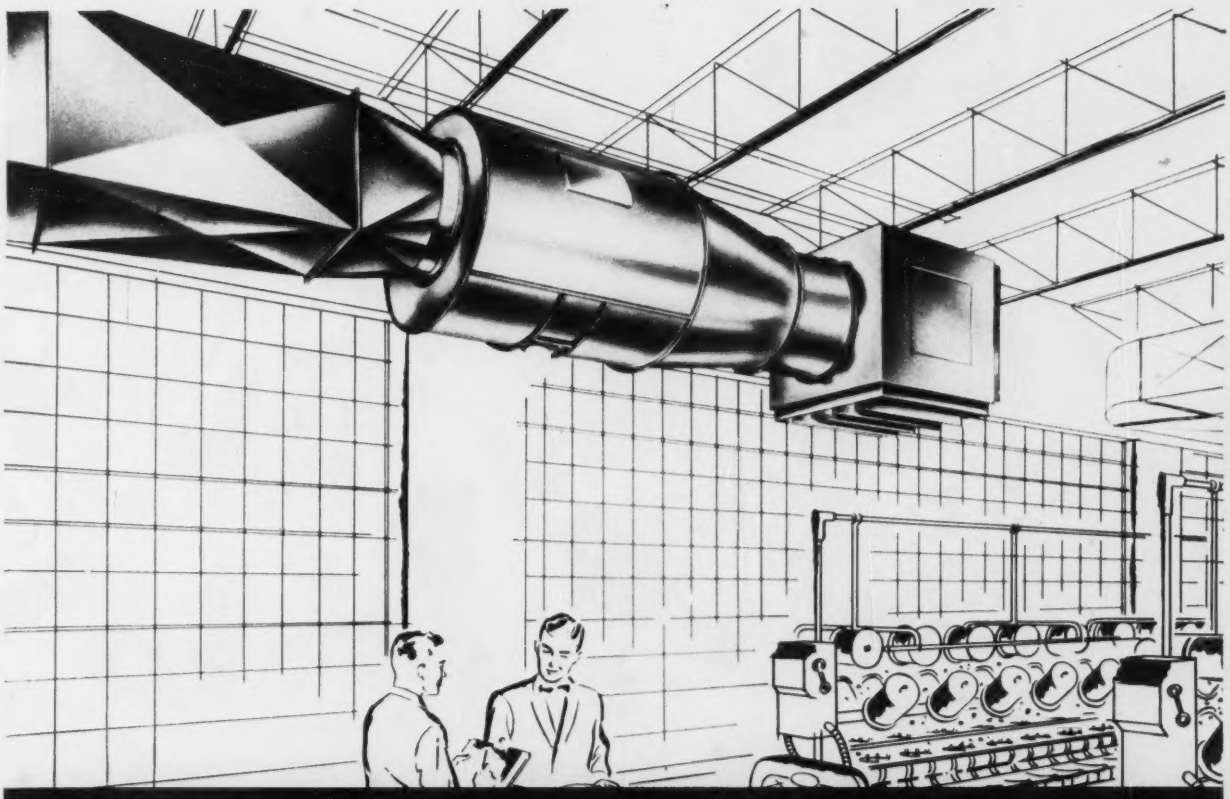
Carrier air conditioning · refrigeration · industrial heating

*Reg. U.S. Pat. Off.



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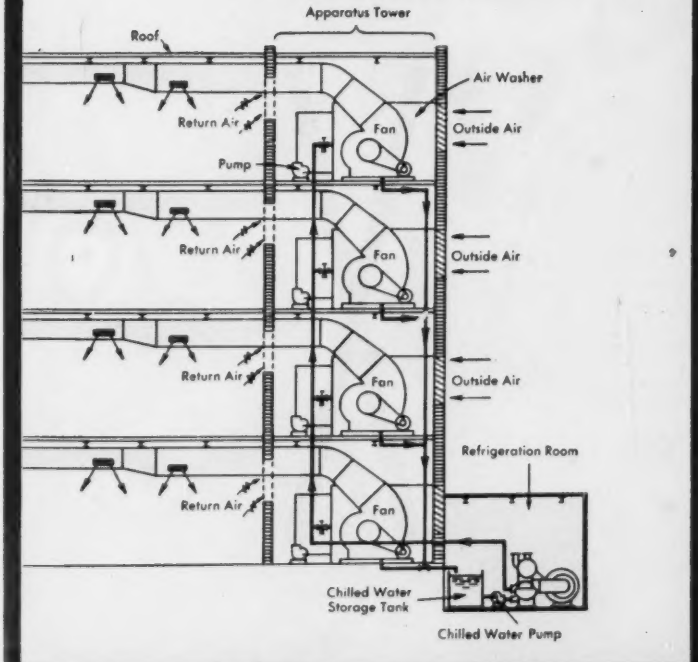
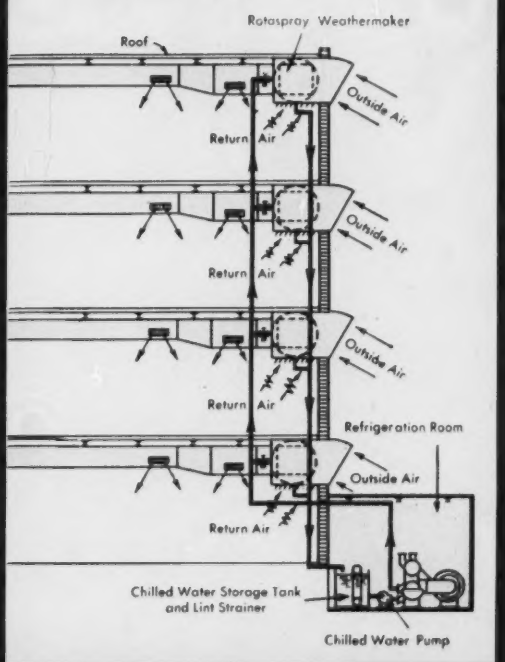


New Carrier Rotaspray System without apparatus tower



In addition to doing away with the need for an apparatus tower, the Carrier high-velocity Rotaspray Weathermaker System substantially lowers maintenance costs. It also has a lower operating weight and occupies less space than conventional systems.

DIRT-RESISTANT Tennantized floor allows faster sweeping. Saves manhours.

Why most money-making mills have TENNANT-maintained floors

Mills that make money *today* usually know their maintenance costs to a penny.

That's why about 9 out of 10 successful mills, large and small, use the TENNANT SYSTEM of Floor Maintenance.

They know, from their own cost records, that this system provides clean, bright floors *at the lowest cost per sq. ft. of any floor maintenance method* available today. Here's why:

SAVES MANHOURS—*Tennantized* floors have 3 times the dirt resistance of most textile floors. Saves cleaning time, cuts sweeping costs, etc.

How the TENNANT SYSTEM cuts floor care costs...

1 **SAVES TIME.** Dirt is easily wiped off surface.

2 **SAVES FLOOR SEAL.** Tennantized floors seldom need refinishing.

3 **SAVES BUFFING.** New method brightens floor; cuts buffing time as much as 80%.

REQUIRES LESS FLOOR SEAL—New custom-fitted TENNANT seals *last longer than any comparable materials we know of.* Cuts annual seal costs and recoating expense. WRITE TODAY *for full details. G. H. Tennant Co., 735A N. Lilac Drive, Minneapolis 22, Minn.*

TENNANT

The Textile Industry's Most Widely Used

FLOOR MAINTENANCE SYSTEM

Methods

Machines

Materials

FLOOR MAINTENANCE SYSTEMS

Shorts and Remnants

(Continued from page 24)

honors, for the distinction of being known as 'Style-right'."

S&R, being an economist of little note, has another answer, and that is for Congress to pass a law prohibiting the third shift or limiting textiles to a five-day week. They pass laws on hours for the mechanic. How about for the machine?

Consumption would more than catch up with production. Mills would make more money and buy more equipment (more advertisers for TI) and start turning out as much on two shifts as now on three, and we'd be back where we started—or maybe increased population would catch up on us by then.

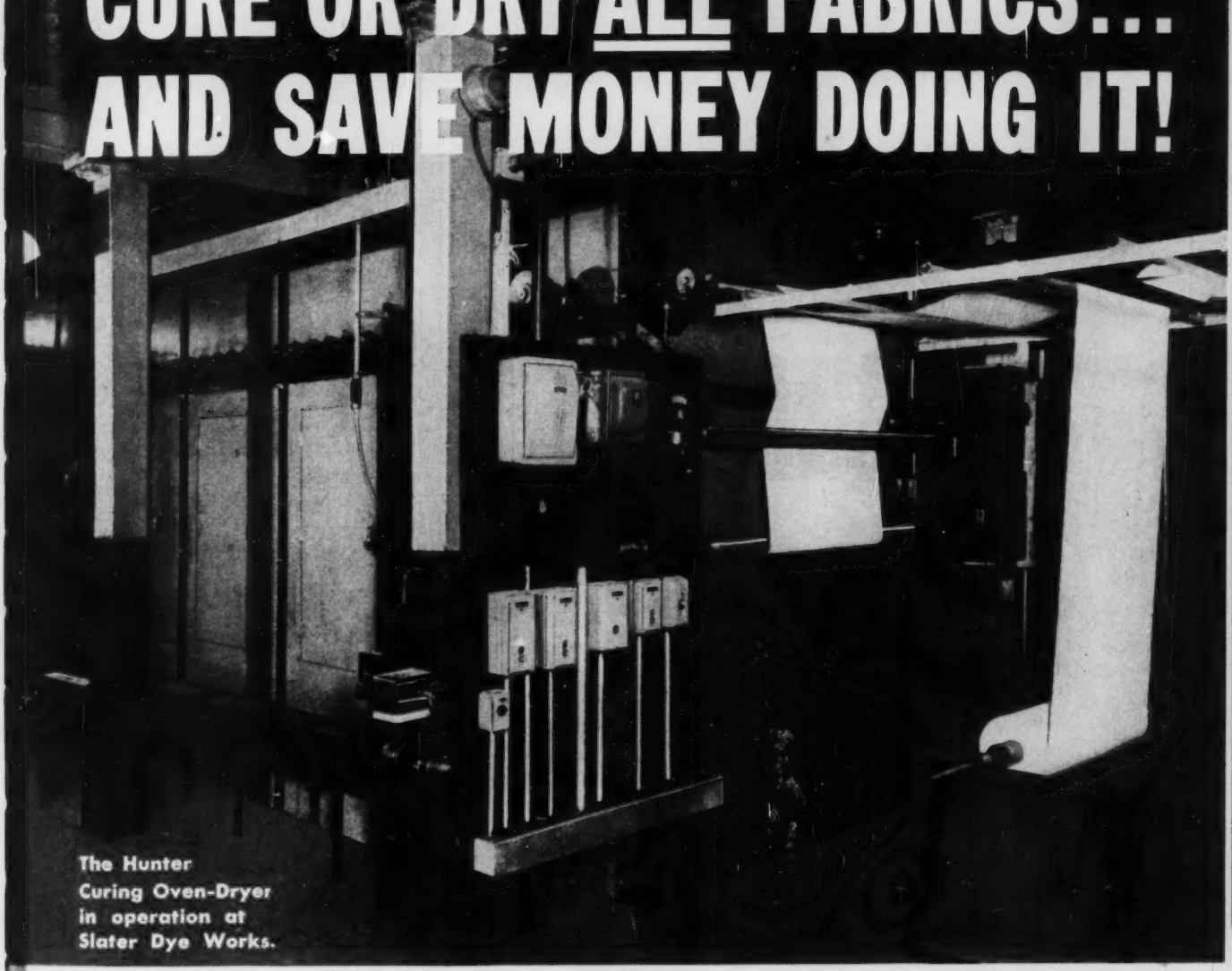
► As the would-be suicide said, "You can't win." He determined to put an end to it by taking poison, putting a rope around his neck, tying it to a bridge, and jumping off with a pistol at his head. The jerk of the rope ruined his aim, and the shot hit the rope (rather than his head), dropping him into the river where the water he swallowed destroyed the poison; and if he hadn't been such a good swimmer, he would have drowned.

► Looks like a long hard winter for S&R's girl picture fans, but that's **Jody Shattuck,** Miss Georgia, christening AAXICO Airlines "Textile Trader," a new all cargo aircraft op-

erating daily from New Orleans via Atlanta to N. Y. The gentleman at the far left is friend **Henry Ball,** Exec. V. P. of the Tufted Textile Mfrs. Assn., who spoke at the inaugural. And that is a bottle of Coca-Cola (adv.) the gal is using for the christening.

► Maybe Sputnik can be viewed

CURE OR DRY ALL FABRICS... AND SAVE MONEY DOING IT!



The Hunter Curing Oven-Dryer in operation at Slater Dye Works.

The HUNTER Curing Oven-Dryer (used in range or as an individual unit) is a double-duty machine that not only cures *all* resin-treated fabrics, but also drys all fabrics. As a curing oven, it speeds polymerization of the resin by uniformly heating both sides of the cloth. As a dryer, it provides the most economical drying for cottons, synthetics, wools, and blends. As a curing oven or dryer it offers impressive "plus production" features:

SPACE SAVING — Sectionalized construction allows flexibility in positioning and easy handling of increased capacity installed either overhead or at floor level.

HEAT SAVING — Exclusive Hunter "no-through" metal panel construction *guarantees negligible heat loss.* Keeps heat where it is needed.

IMPROVED QUALITY — Three centrifugal fans, assembled on one shaft in each fan chamber, provide an even distribution across the width of the entire fabric. Air is blown from top and bottom between each cloth passage to assure *even* application of heat to *both sides* of the fabric.

POWER SAVING — This unique Hunter air system is driven at maximum efficiency utilizing a minimum of horsepower.

SIMPLIFIED MAINTENANCE — Large doors permit quick and easy threading, cleaning. Fewer, better parts assure minimum downtime.

The HUNTER Curing Oven-Dryer can handle *all* fabrics for you, can make money for you. It is in *successful operation* at: **Slater Dye Works, Inc., Palisades Dyeing Corp., Rock Hill Printing & Finishing Co., Allentown Converting Co., Cliffside Dyeing Corp., Santee Prints Works, Attleboro Dyeing and Finishing Corp., Troy Blanket Mills, etc.** Get *all* the facts on the HUNTER Curing Oven-Dryer. Write today for HUNTER Bulletin CO 10.

JAMES HUNTER

JAMES HUNTER MACHINE COMPANY • NORTH ADAMS, MASSACHUSETTS
SOUTHERN SERVICE PLANT: JAMES HUNTER, INCORPORATED • GREENVILLE, S. C.

OBSOLESCENCE
IS A VERY FRIGHTENING WORD...

In a day and age when jet aircraft and guided missiles become obsolete due to technological advances before they even leave the drawing board, obsolescence becomes a very frightening word.

It is, nonetheless, a word which has great significance for manufacturers in every field, PARTICULARLY TEXTILES.

Many new textile machines are so improved over machines now in use that a single new machine does the work of four or five old ones. In the buyer's market of today, mills that overlook the replacement of obsolete machinery run the risk of becoming so-called "marginal mills" . . . mills that are the first to fail when prices are low.

Look at your own mill—look for places where new machinery might increase production or do a better job—look for obsolescence!

"DO IT RIGHT . . . THE FIRST TIME"

J. M. CLAYTON CO.

CONTRACTING ELECTRICAL ENGINEERS

Serving The Textile Field For 52 Years

78 SIMPSON ST., N.W. ATLANTA, GEORGIA

Shorts and Remnants

only through the eyes of the young. Recently Sputnik #1 was reported to be on view over Atlanta, but only S&R's young'un could see it. When questioned as to what it looked like, she said, "Just like a Sputnik, of course." So there you have it—just like any old Sputnik—you see one, you see them all. And what became of the dog who was moon's best friend.

Posters

"We would like to receive full information on your Poster Service for opening through weaving. . . . "

G. A. DOUGALL
Quality Control Supervisor
Bruck Mills, Ltd.
Sherbrooke, Quebec, Canada

"We are interested in posters similar to the attached that may apply to our operations. If you have a catalog or other information pertaining to this type of poster. . . "

C. A. FOWLER
Pur. Agt.
Columbian Rope Co.
Auburn, New York

► TI is not selling posters. This reader service started with the July '57 issue and is still running. Treats all textile operations. Reprints for bulletin board use are free as long as supply lasts.

Wants Nylon Spinning Tape

" . . . We believe that this nylon spinning tape [May '57] will be of interest to us. However, we are unable to locate the address of Oliver D. Landis, Inc. . . "

JOHN E. CAMPBELL
Pur. Agt.
United Elastic Corp.
Easthampton, Mass.

How To Ruin Cotton

" . . . I have read with interest the article entitled 'How to Ruin Cotton' [Nov. '57, p. 89], and while I note that the article has been forwarded by you to the Secretary of Agriculture, I am also taking the liberty of sending my copy to the Department. . . "

DICK RUSSELL
United States Senate
Washington, D. C.

► Above article dealing with textile mill problems originating with the practice of over-machining of cotton at the gin for upgrading also brought

(Continued on page 38)

New Taylor Volumetric Differential Pressure Transmitter

. . . ELIMINATES ~~PURGE~~ AND ~~SEAL~~ PROBLEMS ECONOMICALLY!

Ideal for these difficult flow and liquid level measurements:

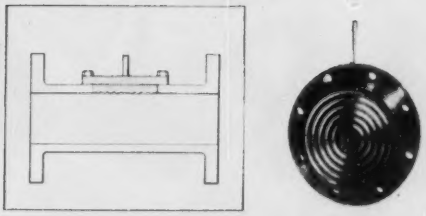
- Slurries
- Corrosive liquids (*Beam and Package Dye Machines*)
- Colloidal suspensions
- Fluids that jell when not in motion

The new Taylor Volumetric Differential Pressure Transmitter is completely isolated from the process material. Thus it never has to be purged of deposited material, never suffers from corrosion. The pressure-sensitive diaphragms may be installed flush with the inside of the pipe or tank in a variety of mountings. The temperature limit is 300° F. at the diaphragms. Pressure limit of the instrument is 1500 lbs., and the system is limited only by the flange rating on the primary side.

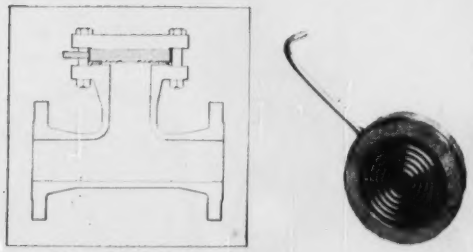
This instrument is a modification of the familiar Taylor 333RD differential pressure transmitter, and is just as accurate, sturdy and dependable.

For full details about this new instrument, ask your Taylor Field Engineer, or write for **Bulletin 98281.**

Taylor Instrument Companies, Rochester, N. Y., and Toronto, Ontario.



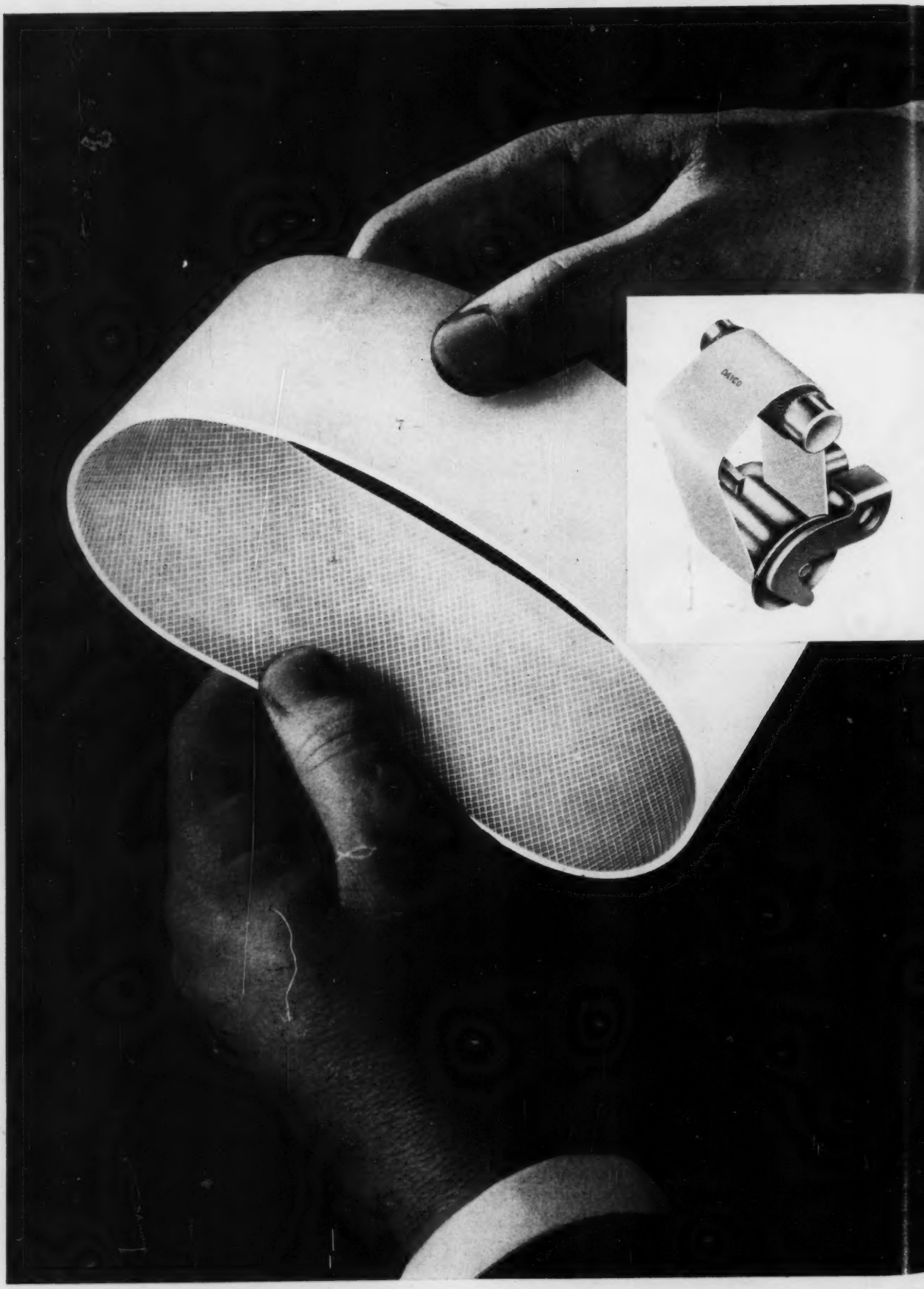
Type 95 flange (*right*), for use with chemical tee. For flow installations where diaphragm is flush with the inside of pipe, so that process fluid imparts a scouring action. Also for liquid level requiring flush installation. Maximum pressure 300 psi.



Wafer type sensing element (*above*), for use with standard 3" ASA flange, where diaphragm need not be flush mounted, e.g., corrosive flow or liquid level measurement. Standard diaphragm material, for both types, 316 Stainless Steel; alternates available. Maximum pressure 1500 psi.

Taylor Instruments
MEAN
ACCURACY FIRST

VISION · INGENUITY · DEPENDABILITY



Exclusive Dayco Embossed Design

Cuts apron drag in half

On Systems not using fixed centers.

THE EMBOSSED inside surface—exclusive with new Dayco Aprons—is the first really basic change in apron design in over 20 years. Run your thumb over the inside of one of the new aprons and notice how it floats on the bosses . . . and smoothly, too! That's exactly the way an embossed Dayco Apron rides over the nose-bar because the bosses reduce the area of contact and the total friction drag.

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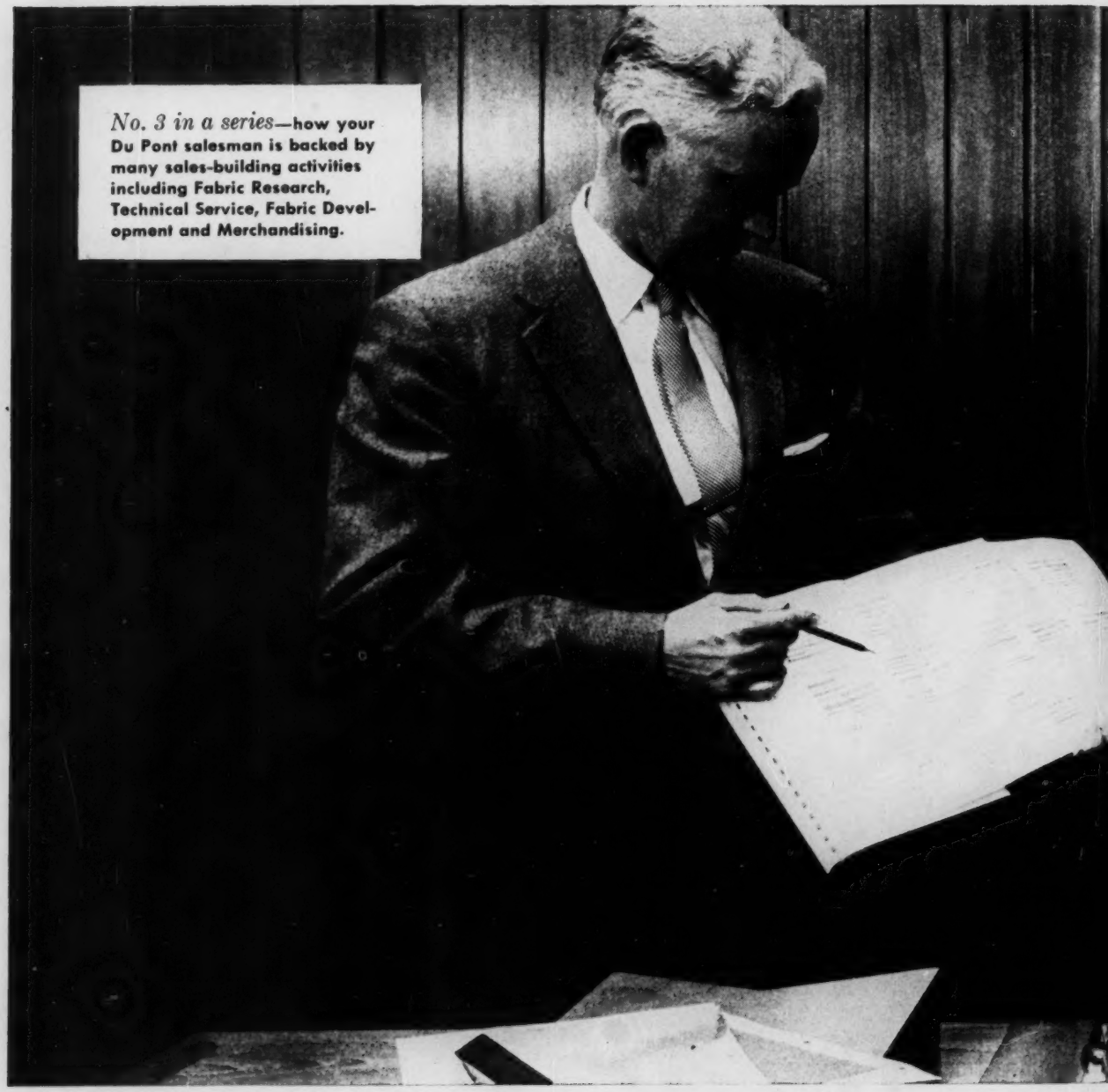
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*Du Pont's registered trademark for its acrylic fiber.

DU PONT
REG. U.S. PAT. OFF.

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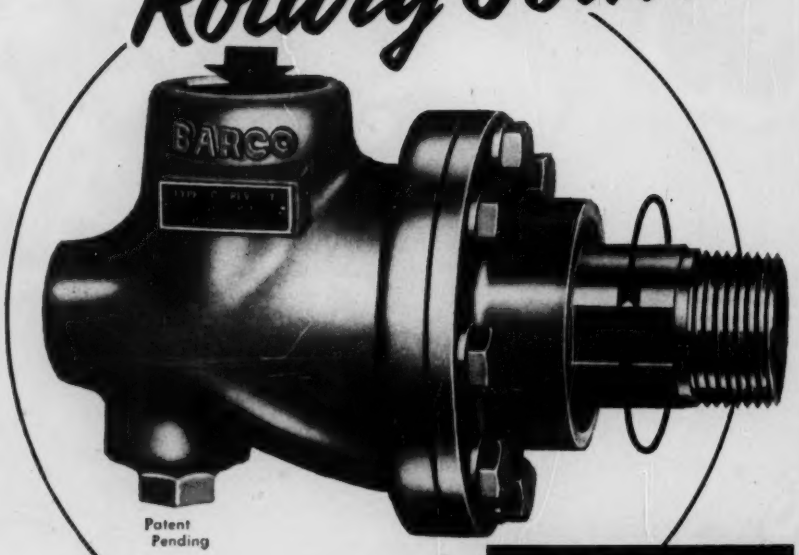
DU PONT BUILDS PROFITS FOR YOU

NOW-A Better Rotary Joint!



SIZES
½" ¾" 1" 1¼"
1½" 2" 2½" 3"

NEW BARCO TYPE C Rotary Joint

for

STEAM WATER OIL AIR or GAS

"SUPER" Performance and Construction —at no extra cost!

"CRACK-FREE" CHROME PLATED SLEEVE—A standard Barco feature. "Crack-free" chrome on rotating sleeve minimizes corrosion, friction, wear. Stainless steel spring also standard.

RESISTS SEAL RING BREAKAGE—The spherical seal ring is under compression, not *tension*, loading. Seal withstands shock loads and alternating hot and cold service.

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(Continued from page 32)

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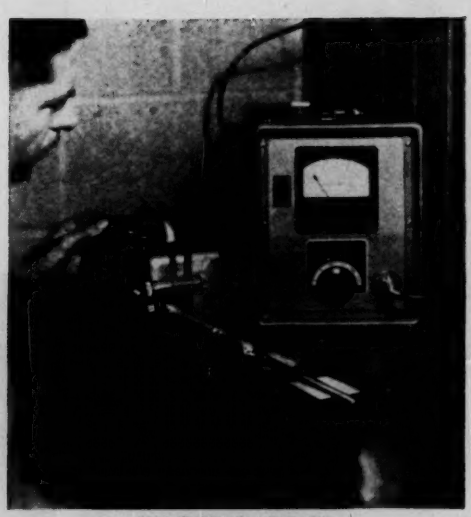

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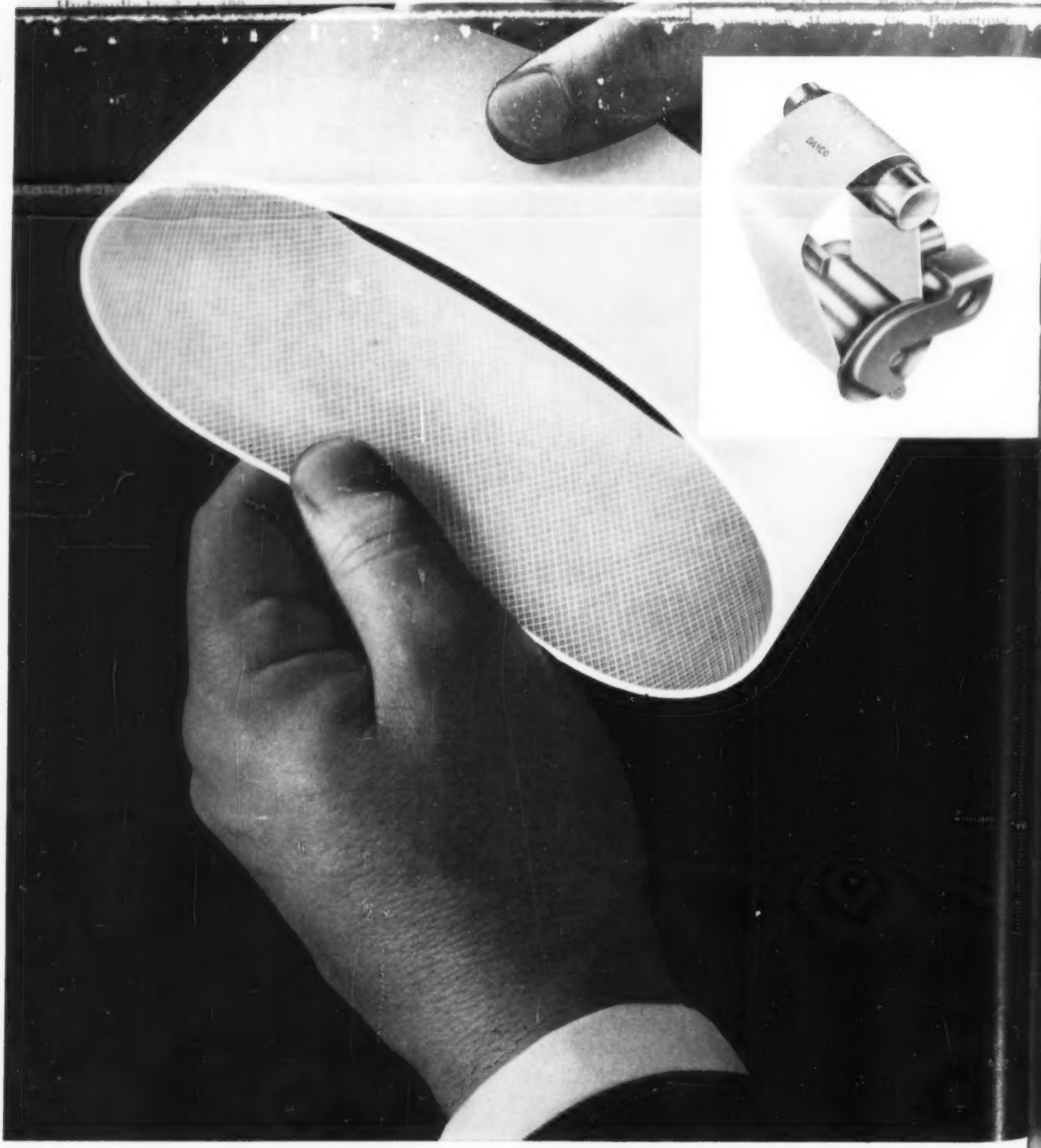

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FOR ALL SERVICES—One basic style of joint for single flow or syphon flow . . . one basic seal for all services. AVAILABLE NOW.

SEND FOR NEW CATALOG 310 TODAY.

PRODUCTS BACKED BY EXPERIENCE
BARCO
ANNIVERSARY 1908 50TH 1958

BARCO MANUFACTURING CO.
574A Hough Street • Barrington, Illinois

The Only Truly Complete Line of Flexible Ball, Swivel, Swing and Revolving Joints
In Canada: The Holden Co., Ltd., Montreal

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► And so as we embark on our 60th year (just a youth) of publication, S&R and TI wish all of you a Happy and Prosperous 1958. Whoopee!

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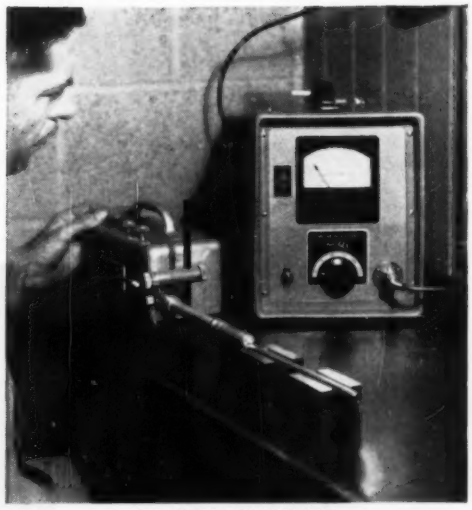
FOSTER MACHINE COMPANY

Westfield, Massachusetts, U. S. A.

Southern Office: Johnston Bldg., Charlotte, N. C. • Canadian Representative: Ross Whitehead and Company Limited, 1475 Mountain St., Montreal, Quebec and 100 Dixie Plaza, Port Credit, Ont. • European Representative: Muschamp Textile Machinery Limited, Keb Lane Bardsley, Oldham, England



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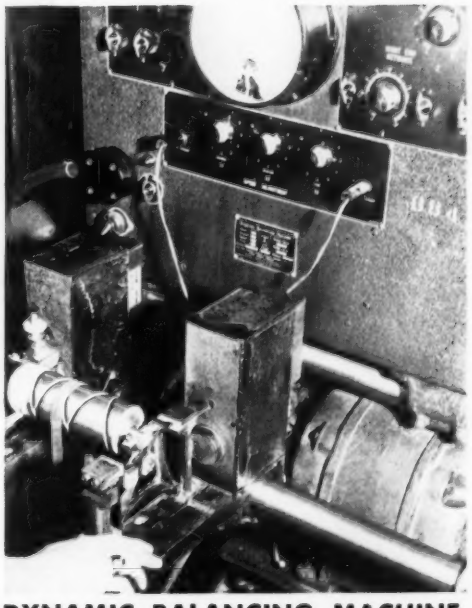
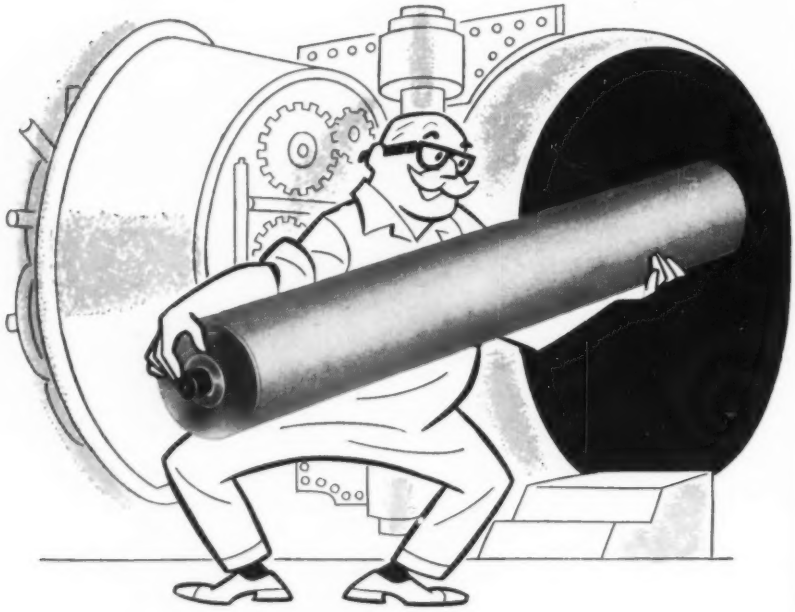


DYNAMIC BALANCING MACHINE

PROPER CARE

MEANS *Extra Wear* WHEN STORING RUBBER ROLLS



THESE 7 STEPS CAN SAVE YOU MONEY!

1. Rest rolls on journals, never on rubber surfaces.
2. Store in cool, dark, damp place with temperature preferably at about 50° F.
3. Avoid temperatures below 32° F – serious damage can result from freezing.
4. Rotate rolls with soft, heavy covers periodically (about every 2 months) to prevent possible distortion due to sagging of covers.
5. Regrind rolls if stored more than 6 months. Do this shortly before putting into service to be sure of fresh unoxidized surface and proper crowns.
6. Cover rolls in storage with paper to reduce oxidation of surfaces.
7. Use a rust preventive on journals and exposed metal surfaces.

Follow these time-tested rules and you will get better service and longer life from your rubber covered rolls.

For more than thirty years, Tyer has been engaged in the development, compounding and manufacture of high quality Rubber Covered Rolls for many industries. Make use of this specialized experience – ask Tyer engineers for recommendations concerning *your* specific roll applications. Or for free catalog on Tyer Rubber Covered Rolls, write today to Dept. TI.

TYER *Rubber Company*

ANDOVER, MASSACHUSETTS, U. S. A.

Personal NOTES

ABOUT MEN YOU KNOW

The annual brotherhood award of the cotton goods division of the National Conference of Christians and Jews was received by **Donald Comer, Sr.,** chairman of the executive committee of Avondale Mills, Sylacauga, Ala. More than 400 members of the cotton goods and allied industries were present at ceremonies honoring the recipient at the Waldorf-Astoria Hotel. Cited were Mr. Comer's numerous humanitarian achievements in charitable as well as business activities.

William H. (Dick) Cook, Jr., new superintendent at Cowikee Mills, Inc., Ozark, Ala., plant of Avondale

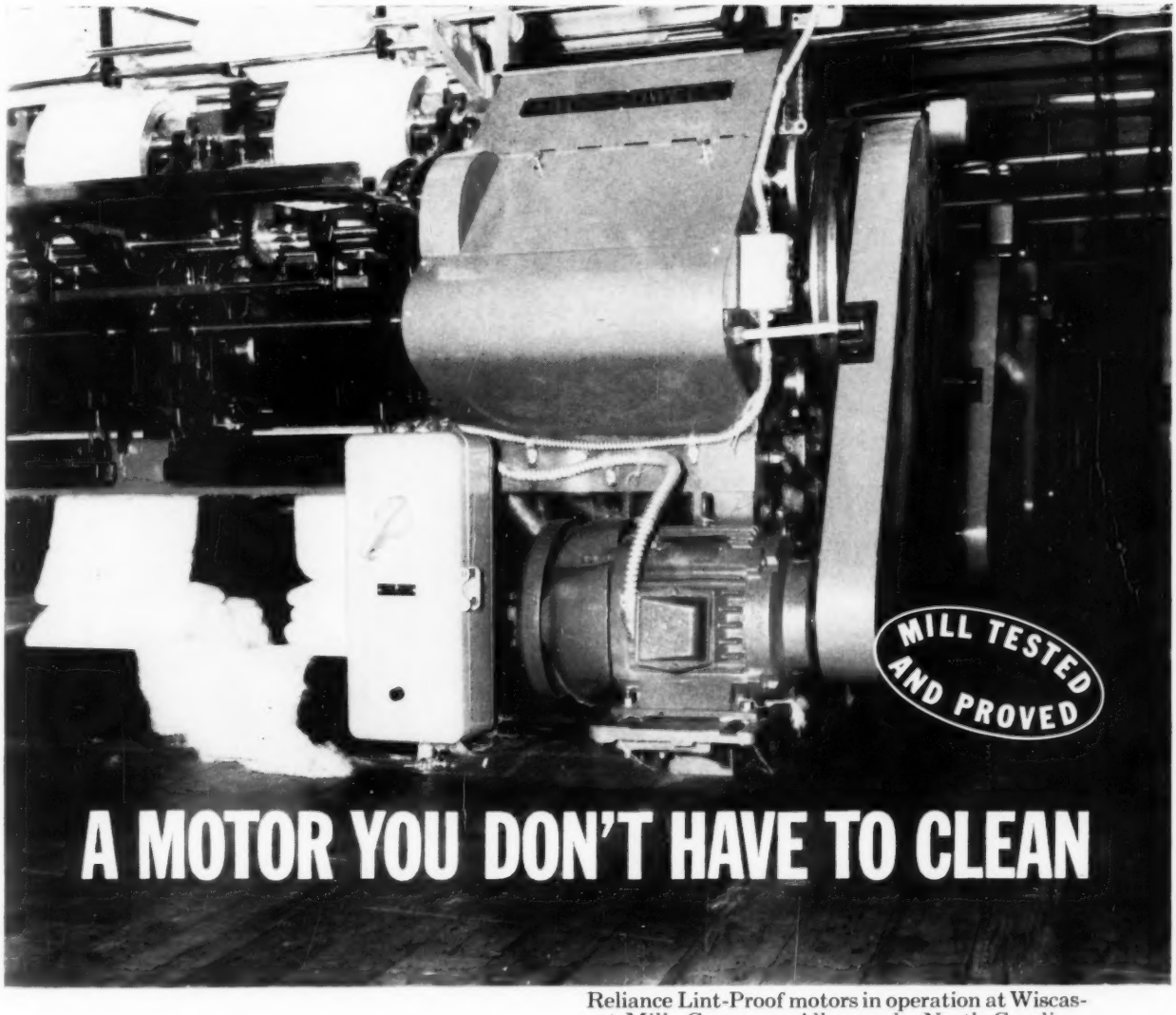
Mr. Cook

Mills, Sylacauga, Ala., is a former employee of Swift Manufacturing Co. at Columbus, Ga., and Alabama Mills at Wetumpka, Ala.

United Merchants & Manufacturers, Inc., Greenville, S. C., has named **George W. Androne** to a newly established position as project engineer—service and consultant work for the fabric production division. Mr. Androne formerly belonged to the Clemson College faculty.

Berkshire Knitting Mills, Reading, Pa., announce the appointment of **Paul E. Guenther,** vice-president-foreign operations, to the additional position of vice-president - finance. Mr. Guenther was named to succeed **John J. O'Connell** who has retired after 23 years service with the company.

Newly named plant manager of Burlington Mills' Cascade rayon plant at Mooresville, N. C., is **Noel E. Garvin,** former assistant division



Reliance Lint-Proof motors in operation at Wiscasset Mills Company, Albermarle, North Carolina.

Reliance Lint-Proof A-c. Motors Designed for all textile machinery

These motors have an end bracket with a high velocity internal contour design that blasts the lint off the motor frame. The special smooth finish of the Reliance frame makes it impossible for any lint to stick to the motor.

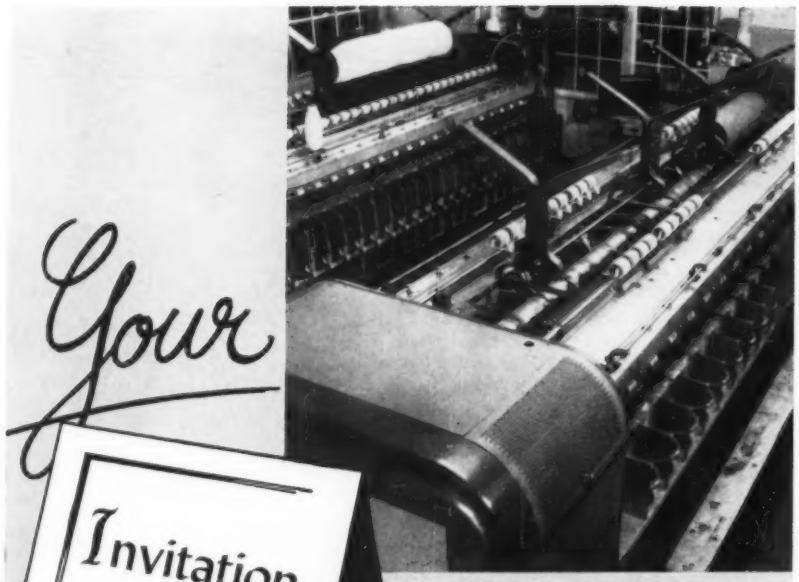
Totally-Enclosed, Reliance Lint-Proof motors can be installed *under* the frame to save valuable floor space. No need to keep them accessible for cleaning.

NOW AVAILABLE—1 to 40 hp. Totally-Enclosed, air cooled, Lint-Proof textile motors. Special dual torque motors available for roving application. B-1680

Write for bulletin B-2404

RELIANCE ELECTRIC AND ENGINEERING CO.

DEPT. 201A, CLEVELAND 17, OHIO
CANADIAN DIVISION: TORONTO, ONTARIO
Sales Offices and Distributors in Principal Cities



Your Invitation

Demonstrator Frames at North Andover

to "Coordinated Production"

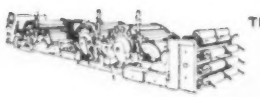
Any required Quality Yarn at High Production Rates can be a *Known Quantity* for you when you run a sample lot of your own standard roping on the most up-to-date Davis & Furber Woolen Ring Spinning Frame — under the supervision of D&F "Coordinated Production" Spinning Technicians.

You are invited to try such a D&F Demonstration, complete with all the most modern technical developments. This can be made available to you either at North Andover or Charlotte. In fact, it can even be arranged on your own D&F Frame in your own mill.

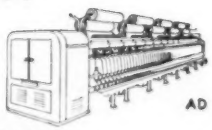
Your stock may be wool, rayon fibre, or nylon. Or it may be a blend of any or all of these fibres plus cotton waste, asbestos, hair blends, or any of the many known synthetics.

Prepare samples of your own roping. Then, let us show you how the Davis & Furber Spinning Frame can bring you the profitable advantages of "Coordinated Production" through greater volume and better quality. Get in touch with — Davis & Furber at North Andover or Charlotte. Do it now.

DAVIS & FURBER
MACHINE COMPANY



TEXTILE MACHINERY DESIGNERS AND MANUFACTURERS
North Andover, Mass.
Charlotte, North Carolina



AD 13-1

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MACHINERY MODERNIZATION • ACCESSORIES, SUPPLIES, CARD & NAPPER CLOTHING, GARNET WIRE, TAPES & APRONS
SPARE PARTS • TECHNICAL SERVICE & CONSULTATION

Personal NOTES ABOUT MEN YOU KNOW

manager of the Brighton division at Shannon, Ga. Mr. Garvin succeeds **W. H. Spencer, Jr.,** who has resigned. **Woodrow Tew,** who had been in Burlington's Greensboro offices in development and technical assignments, has moved to Mooresville as general supervisor of the preparatory department.

Firth Carpet Co., Firthcliffe, N. Y., has announced that **Robert L. Huffines** has been elected a director of the firm. Mr. Huffines is a former president of Amerotron Corp., Textron, Inc., and Burlington Mills Corp.

Carroll F. Holt has been elected to the position of treasurer at the Fitchburg (Mass.) Yarn Co. Prior to his election, Mr. Holt had been assistant

Mr. Holt

treasurer of the mills. **Frank W. Lyman,** who formerly filled the positions of both president and treasurer, continues as president of the company.

Charles B. Anderson has been elected president of Roxbury Carpet Co., succeeding **A. J. deGozzaldi,** who is retiring as president and who was elected chairman of the board. Mr. Anderson has been executive vice-president of the company since 1952.

Dalton E. Francis, vice-president of the Stedman Manufacturing Co., Asheboro, N. C., has been appointed director of sales and elected to the board of directors. **Wilbur W. Thomas,** treasurer, has been elected a director and will assume additional duties as a vice-president. **Robert D. Crowley,** plant manager, has been advanced to vice-president in charge of manufacturing, and **James L. Hege** named vice-president in charge of marketing. Mr. Hege was formerly a partner in the Greensboro advertising firm of Hege, Middleton and Neal. **John S.**

(Continued on page 46)

SOLVAY PROCESS DIVISION

ALLIED CHEMICAL & DYE CORPORATION

61 Broadway, New York 6, N. Y.

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BRANCH SALES OFFICES:

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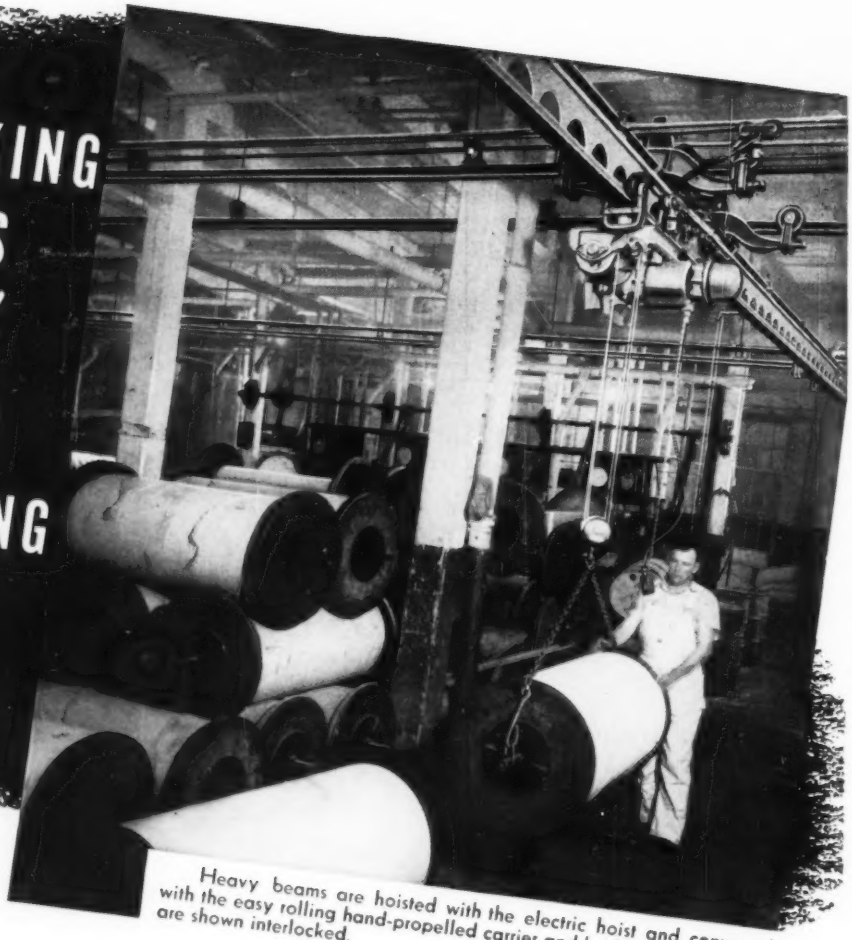
INTERLOCKING BRIDGES *Speed* BEAM HANDLING



Heavy beams are hoisted with the electric hoist and conveyed with the easy rolling hand-propelled carrier and bridges. Two bridges are shown interlocked.

SIMPLE, inexpensive, hand-propelled transfer bridges, as illustrated, provide hoisting and conveying service for the entire floor area of the slasher room bays in which they operate. Interlock mechanisms on the ends of the bridges permit locking two or more bridges together so that a carrier with its load can be transferred from one to the other.

Because of ball-bearing wheels and smooth, raised, flat track treads, extremely little effort is required to propel either a bridge or carrier. Cleveland Tramrail equipment has a guaranteed starting effort of 15 lbs. and running effort of 10 lbs. per ton weight.

Cleveland Tramrail has been tried and proven in dozens of textile mills of all kinds and sizes. It is lifting and conveying cotton, wool, rayon, nylon and silk in every stage of preparation wherever the weight is more than one man can handle.

If you are interested in improved efficiency and many other important advantages that are possible with Cleveland Tramrail, you owe it to yourself and to your company to get the facts.

GET THIS BOOK!
BOOKLET No. 2008. Packed with valuable information. Profusely illustrated. Write for free copy.

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THE CLEVELAND CRANE & ENGINEERING CO.
2857 East 287th Street, Wickliffe, Ohio

CLEVELAND TRAMRAIL
OVERHEAD MATERIALS HANDLING EQUIPMENT

PAINT BULLETIN

FROM INDUSTRIAL FINISHES DIVISION
MINNESOTA PAINTS, INC.

SUBJECT: Floor Finishes

No. 1 of a new, instructive series of Paint Bulletins. The information, compiled by the Industrial Division of Minnesota Paints, Inc. is the result of intensive research and extensive data collected from numerous successful applications.

Floor Finishes, specifically the *formulation* of floor finishes, was selected as the lead-off article for this new series because there seems to be so little information on how these products are made, why they fill special requirements and what can be expected from their performance.

Proven quality sealers and finishes, as is true of many of the best quality varnishes, are made of China Wood or Tung Oil and Phenolic Resins processed together at the proper reaction temperature and then cooled and reduced to working consistency with thinners and driers.

Tung or China Wood Oil is unlike most other oils in that it is not often used by itself. Its film is tough, elastic and difficult to injure. It has deep penetrating properties and toughens wood fibers. Tung or China Wood Oil also has great water and chemical resistance.

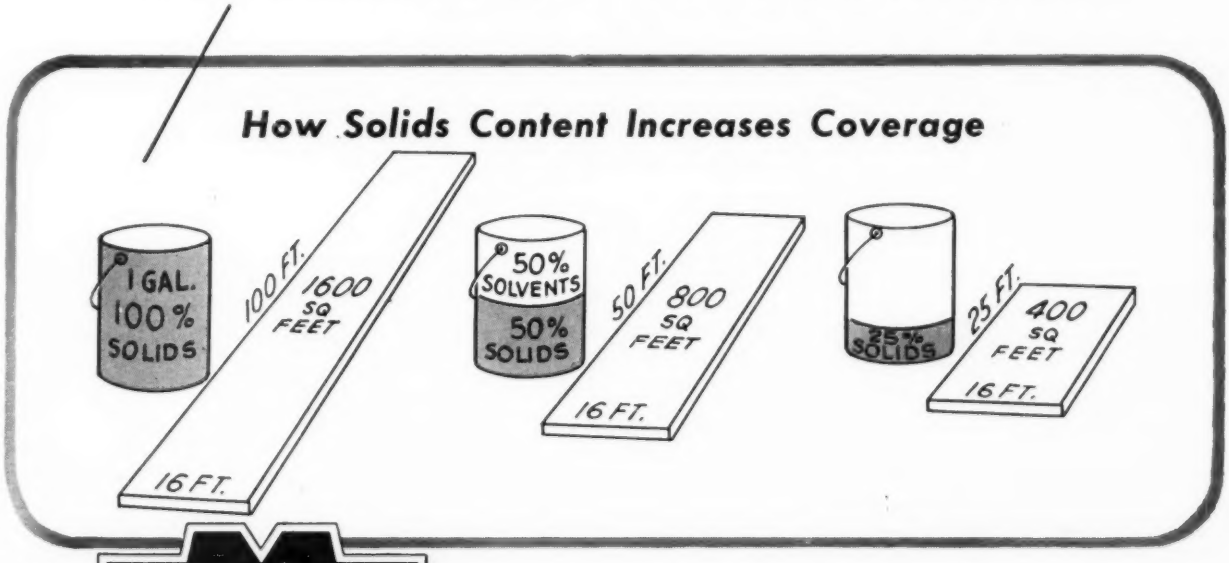
Specific synthetic resins, in the right amount, are in most cases added to give even greater hardness and durability. They also speed the dry and increase the gloss.

Specialized Floor Finishes differ from varnishes in that they have greater penetrating properties, produce less film, are tougher, and withstand more wear. They should be kept or placed in a warm room at a temperature of not less than 72° Fahrenheit for at least 48 hours before using. Unless conditioned they will not spread well or squeegee properly.

Because these finishes are made to withstand heavy duty and unusual punishment, they need a good foundation. For this reason, we recommend the penetrating type sealer for the first coat and second coat. This assures you that the wood will be thoroughly filled with tough, elastic, waterproof Tung Oil.

Minnesota Paints, Inc. has made a thorough study of the proper incorporation of special resins into Tung Oil in order to fit all finishing needs. For every application, care must be exercised in choosing the types of sealers and finishes which can be expected to give top performance.

For helpful information, write Industrial Finishes Division, Minnesota Paints, Inc., 1101 Third Street South, Minneapolis, Minn.



Minnesota PAINTS

MINNESOTA PAINTS, INC.

Your Minnesota Paints Industrial Finishes Representative, with his detailed product knowledge and ability to correctly diagnose your particular problems, can help you select "just the right product" or products. Why not reduce your maintenance material costs and extend your surfaces' lasting power. CONSULT THE MAN FROM "MINNESOTA PAINTS."

PLANTS AT: Minneapolis Ft. Wayne Atlanta Dallas GENERAL OFFICES: Minneapolis

Finest Coiler you can buy!

BOTH HEAD AND BASE SWIVEL FOR ADJUSTMENT

SAVES LABOR

EASIER TO INSTALL

TAKES LESS FLOOR SPACE

McDONOUGH
UNIVERSAL CARD COILER
(Patents Pending)

This coiler is its own best salesman. It outsells all the rest put together because it out performs all others. It saves labor by putting more sliver in the can. Its quality construction, including sealed ball-bearings, hardened steel gears, etc., means extra years of dependable service. Ask for free folder with complete specifications.

Let this coiler prove its worth to you in your mill. Have one installed on a

90 DAY TRIAL *Without Obligation*

Since 1890

McDONOUGH POWER EQUIPMENT, INC.
MACHINE & FOUNDRY DIVISION
McDONOUGH, GA., U.S.A.

Personal NOTES
ABOUT MEN YOU KNOW

(Continued from page 42)

Hudson has been advanced from office manager to controller and **William G. Presnell,** in charge of the firm's quality control program and laboratory, has been named superintendent of production.

Clifton Allen of Andover, Mass., formerly superintendent of Massachusetts Mohair Plush Co., Lowell, Mass., is now in business for himself as a textile cost consultant.

Mara Havinoviski is leaving Standish Mills, Inc., of Esmond, R. I., where he did production planning and control work, to accept a position as superintendent with Ross Mathews Corp., Fall River, Mass.

Fred Gillam has been named vice-president of Kingston Mills, Inc., Cartersville, Ga., in charge of manufacturing. Immediately prior to his new association, Mr. Gillam was manufacturing manager for the firm.

Mr. Gillam

J. P. Stevens & Co., Inc. announces that **Werner von Bergen,** director of research and control laboratories for the Forstmann Woolen Co., has been appointed associate director of research for Stevens. Mr. von Bergen will make his headquarters at the Forstmann Laboratories at Garfield, N. J. * * * Newly named manager of the worsted manufacturing operations in the southern group of the woolen and worsted division is **Harold P. Duncan,** superintendent of the Milledgeville plant. Other changes include **Robert Holcombe** as new superintendent and **J. E. Neighbors** as assistant superintendent of the Milledgeville plant. **James E. Powell** will be manager of the production services department in the staff offices of the southern group which is comprised of plants

(Continued on page 180)

"... Miss Jackson heard that we had reducing agents..."

Solving Miss Jackson's problem of avoirdupois is no stranger than some of the problems that you send us.

Perhaps your problem is avocation. If so, let the Seyco man assimilate it while you avocate.

Warp Sizing: *Softeners, Binders, Penetrants, Ty-In Penetrants, Shuttle Dressing, Waxes.*

Wet Processing Chemicals and Auxiliaries: *Dye Assistants, Penetrants, Rewetting Agents, Sanforized Fabric Oils, Detergents, Scouring Agents, Softeners.*

Niagara Twist-Setter: *Yarn Conditioning Penetrants.*

Seyco Warp Lubricator.

Headquarters for textile chemicals

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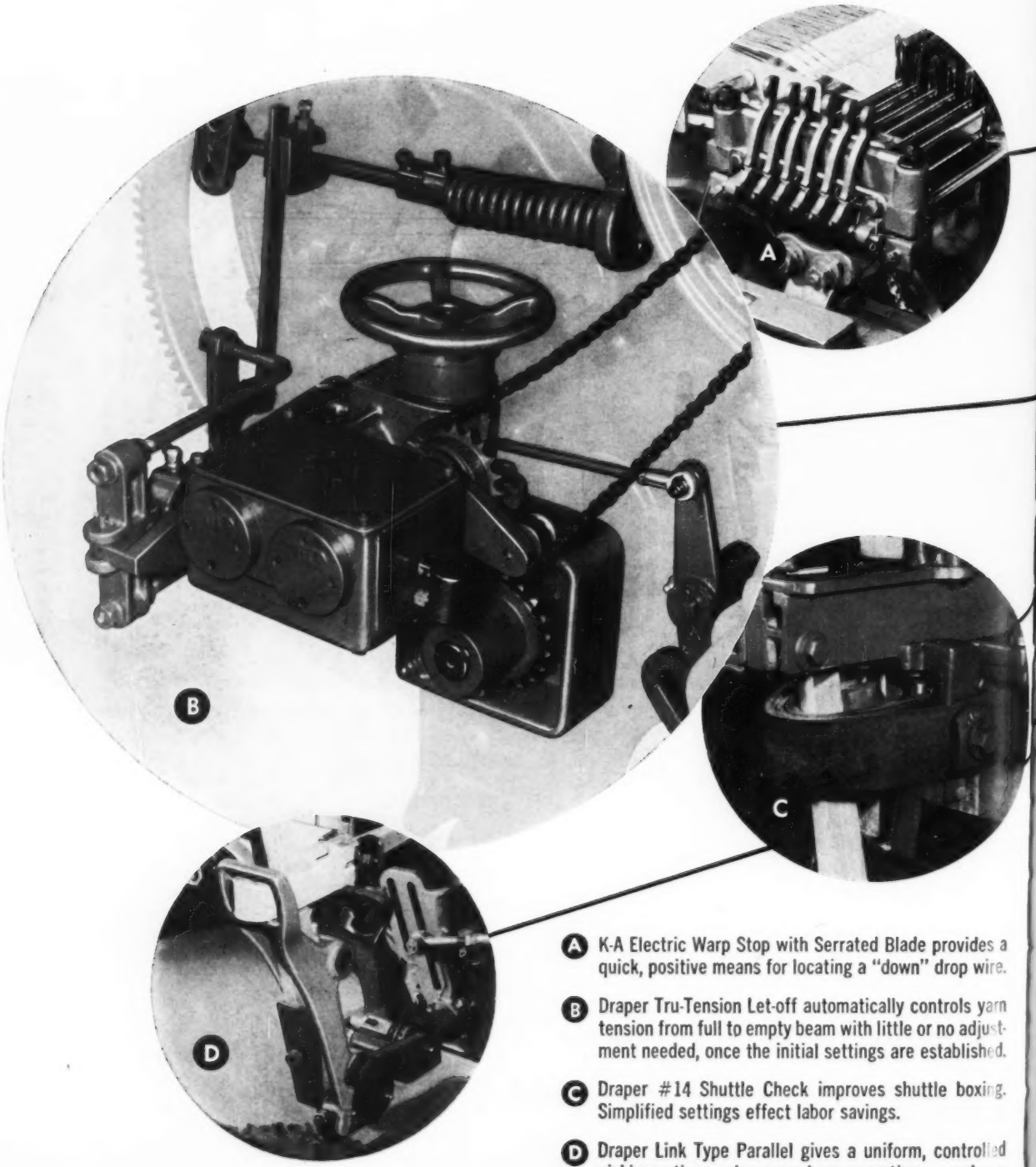
SEYCO

Proven
Loom Developments . .

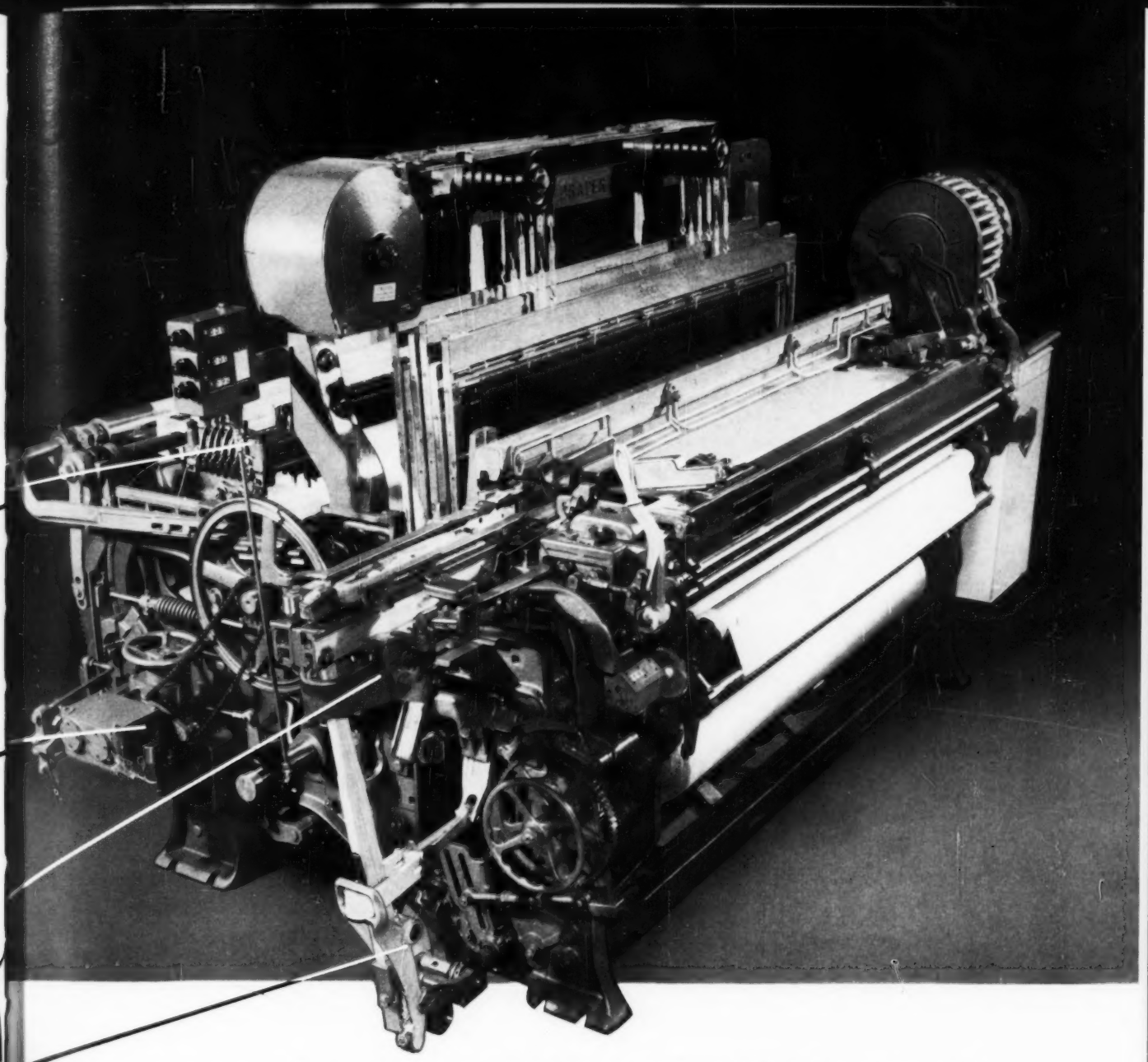


A K-A Electric Warp Stop with Serrated Blade provides a quick, positive means for locating a "down" drop wire.

B Draper Tru-Tension Let-off automatically controls yarn tension from full to empty beam with little or no adjustment needed, once the initial settings are established.

C Draper #14 Shuttle Check improves shuttle boxing. Simplified settings effect labor savings.

D Draper Link Type Parallel gives a uniform, controlled picking action . . . improves loom operation . . . reduces wear on pick motion and parallel parts.



. . increase the versatility and efficiency of the Draper X-2 Model Loom

The Draper X-2 model loom, incorporating many new *tried and proven* loom mechanisms, contributes to greater weave room economy.

The new Tru-Tension Let-off controls yarn tension automatically, from full to empty beam. Cloth defects commonly attributed to the Let-off are eliminated and substantial savings are possible on critical weaves.

Other loom developments, including the Link Type Parallel, #14 Shuttle Check and the K-A Electric Warp Stop with Serrated Blade improve loom performance . . . reduce down time and costly repairs.

These and many other Draper loom attachments combine to increase the versatility and efficiency of the Draper X-2 model loom.

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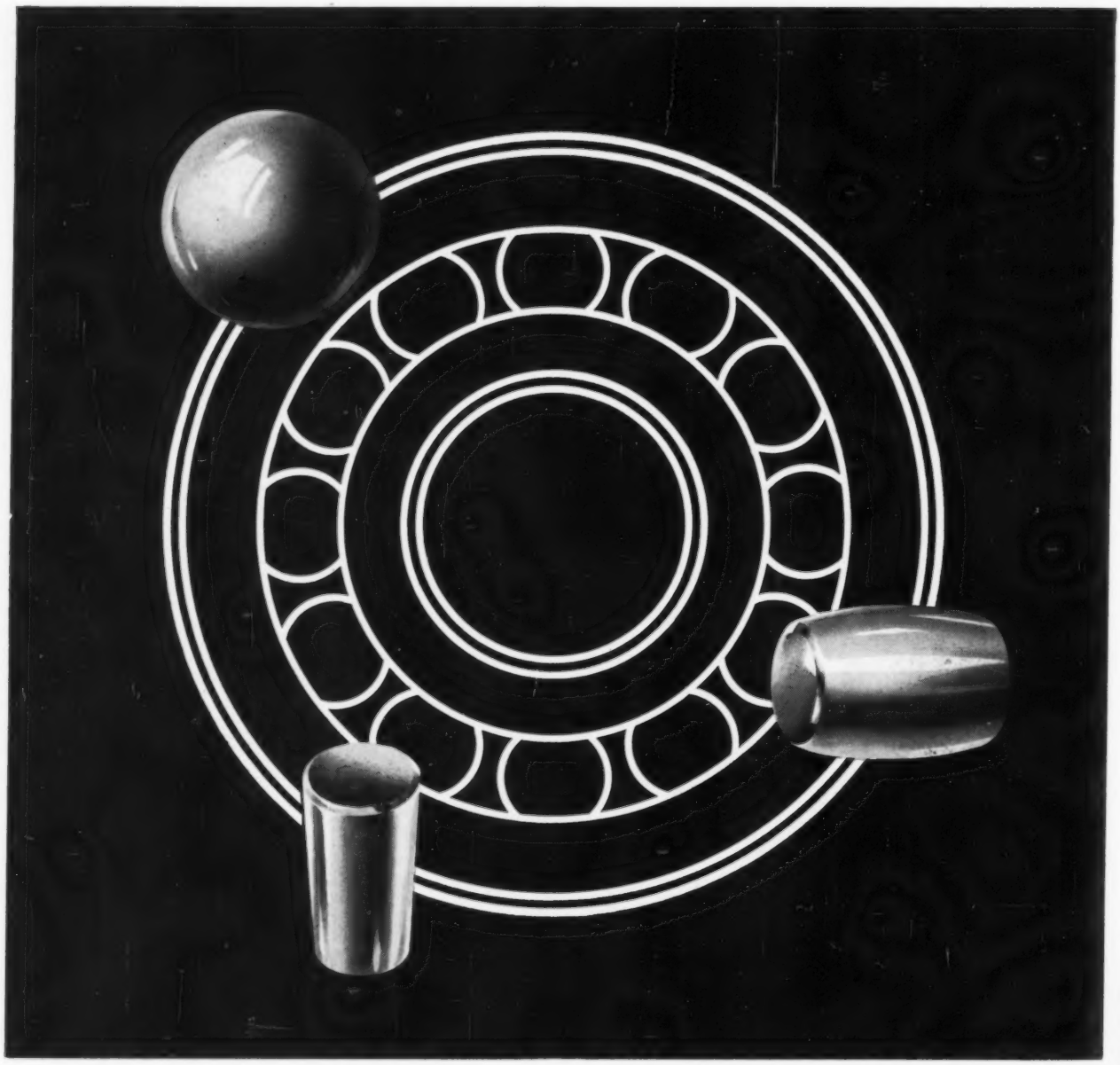

cut bearing maintenance . . . with one lubricant

Nebula EP – another first for Esso Research – is a multi-purpose grease that *out-performs* all other multi-purpose greases. And many specialized greases as well!

Nebula EP works exceptionally well in ball, tapered roller and roller bearings – of *all sizes* from rolling mills to precision instruments.

Nebula EP stands up under extreme heat. It retains its lubricating qualities at high temperatures at which many special heat-resistant greases would have broken down.

And Nebula EP has exceptional water-resistant and rust-preventive properties – an important consideration where water is a factor. What's more, Nebula EP is formulated with a true soap which gives it extra anti-wear and load-carrying characteristics – for an extra margin of protection. High oxidation stability gives Nebula EP longer life in storage and in use.

FREE...Brochure on Nebula's constant consistency-temperature properties...how it does the job of many greases...and better. Write *today* for your copy: Esso Standard Oil Company, 15 West 51st St., Room 3121, New York 19, N. Y.

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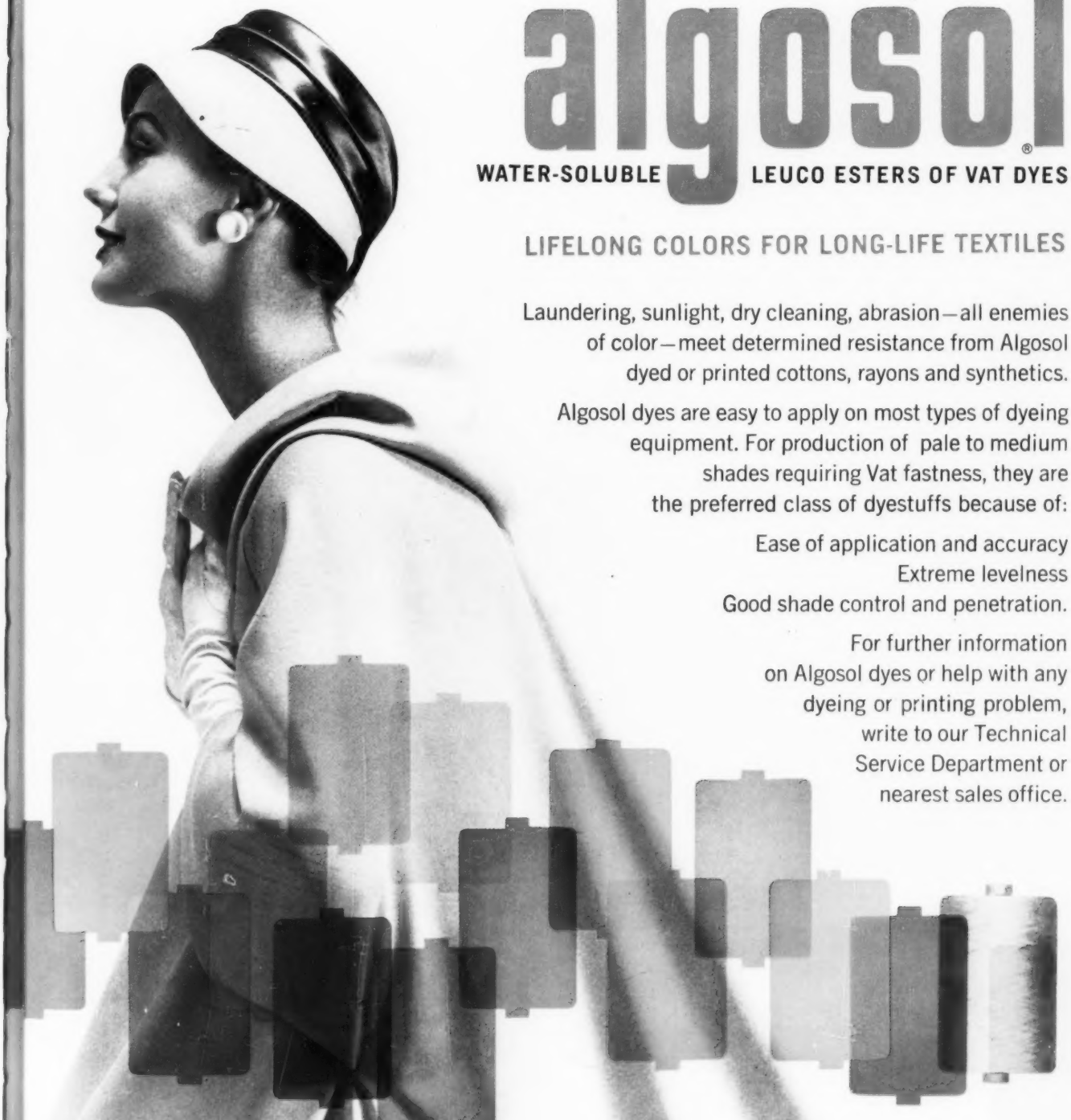

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LIFELONG COLORS FOR LONG-LIFE TEXTILES

Laundering, sunlight, dry cleaning, abrasion—all enemies of color—meet determined resistance from Algosol dyed or printed cottons, rayons and synthetics.

Algosol dyes are easy to apply on most types of dyeing equipment. For production of pale to medium shades requiring Vat fastness, they are the preferred class of dyestuffs because of:

Ease of application and accuracy
Extreme levelness
Good shade control and penetration.

For further information on Algosol dyes or help with any dyeing or printing problem, write to our Technical Service Department or nearest sales office.

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A SALES DIVISION OF

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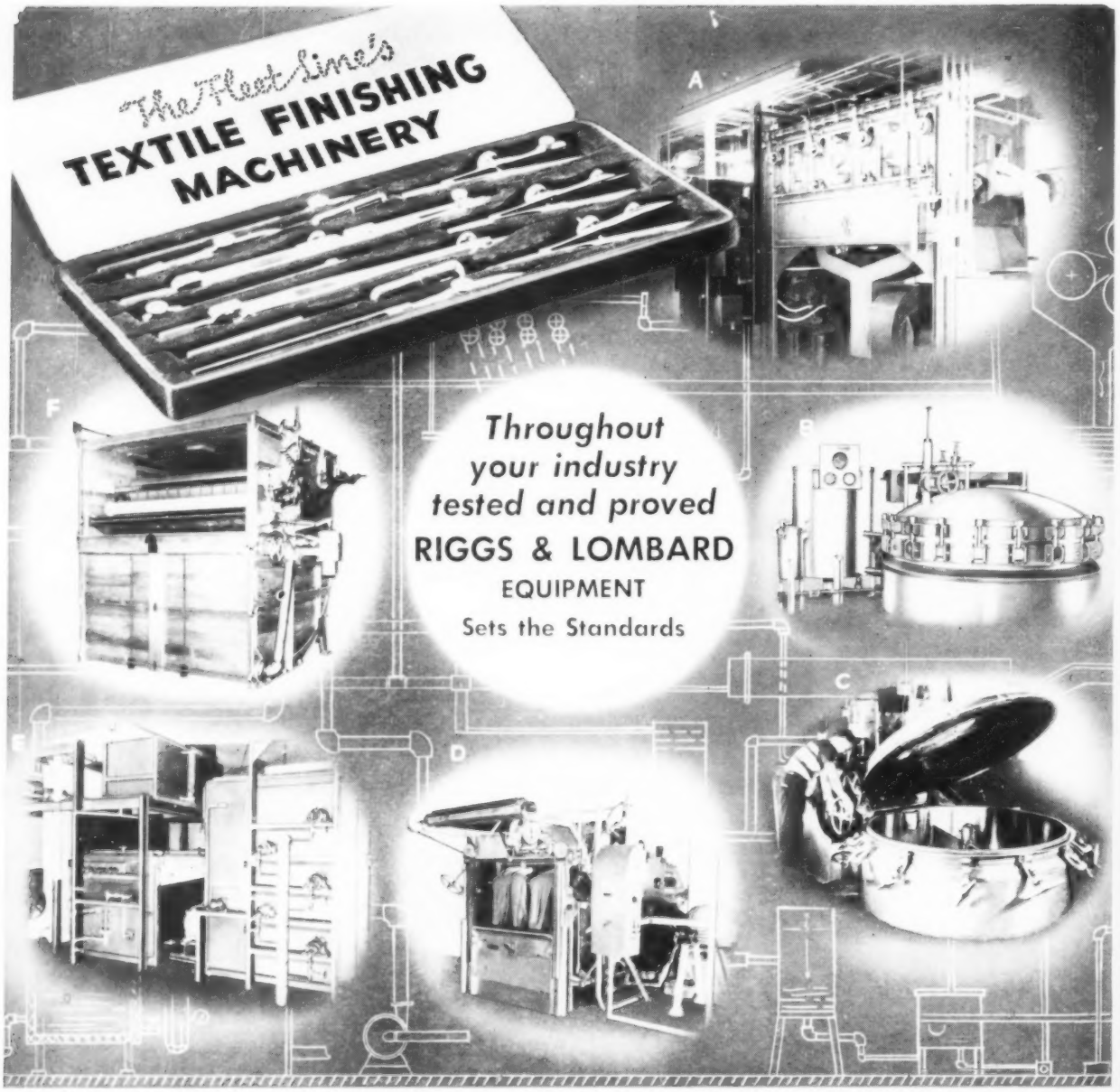
ALGOSOL DYES MANUFACTURED BY THE GENERAL ANILINE AND FILM CORPORATION ARE SOLD OUTSIDE THE UNITED STATES UNDER THE TRADEMARK ...



In textile finishing plants everywhere, R & L equipment has for years been proved best by the only conclusive test — its record for producing high quality in consistently economical operation. Familiar with high standards because we set them, we also know your equipment needs and in our own field we answer them all. Check through the list to see how many ways we can serve you!

"A. Continuous Crusher. B. Stainless Steel Hy-Temperature Stock Dyeing Machine. C. Stainless Steel Atmospheric Pressure Stock Dyeing Machine. D. Stainless Steel Fulling Mill. E. Derby Dry Cleaner. F. Dolly Cloth Washer.

TYPES OF R & L EQUIPMENT

Bleaching Equipment
- Caustic Washers
- Progressive Jigs
- Kettles
- Tanks

Carbonizing
- Cloth Carbonizing Ranges

Cleaners
- Derby Continuous Dry Cleaners

Compacting Machines

Crushers
- Continuous
- Semi-continuous

Dyeing Equipment
- Dye Becks
- Dye Kettles
  - Piece Dye Kettles
  - Rug Dye Kettles
  - Sample Dye Kettles
  - Stock Dye Kettles
    - Standard
    - Hy-Temperature
- Top Dyeing Machines

Dryers
- Tenter

Fulling Mills
- Cloth
- Endless Felt

Laboratory Machines

Padders

Pails

Parts

Poteyes

Pusher Mills

Reels

Rolls
- Miscellaneous
- Fulling Mill
  - Rubber Ring
  - Vulcanized Rubber
  - Wood Lagged

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- Wood
- Rubber
- Stainless Steel

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- Sampling Machines
  - Rope
  - Open Width

Special Machines

Squeeze Roll Extractors

Tanks
- Miscellaneous
- Size Mixing
- Storage

Trucks
- Cloth
- Dye
- Pin

Washers
- Cloth Washers
  - Batch & Continuous
  - Open Width
  - Dolly
  - Felt Washers, Endless

Wringers

Yarn Steamers

On modernization or new installations, consult an R & L Engineers Engineer. No obligation!

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News IN BRIEF

Shut-Down Improves Markets. Commenting on the improved markets for textiles which resulted from the Thanksgiving and Christ-

mas shutdowns, F. E. Grier, president of Abney Mills, said, "I hope that the day is at hand when the mills in South Carolina and all over this nation will have the wisdom and courage to follow a course based on sound business judgment and not based simply on the course which we think our competitors will follow. If that day arrives, it will be the day the American textile industry reaches maturity."

Textile Appreciation Week. Union County, S. C., recently held a "Textile Appreciation Week," in honor of the nine textile mills and the 5745 textile employees in the county. Featured were contests in dress-making, essay-writing, and poster-making; various contests sponsored by the merchants of the county; and selection of a "Union County Textile Queen" from the local mills.

Market Conference This Year. A committee representing producers and processors of all textile fibers, textile merchandisers, chemical suppliers, textile trade associations, and government agencies has given the go-ahead sign for an industry-wide marketing conference, to be held in New York in mid-May, 1958, similar to the one held last year under National Cotton Council sponsorship. Proposed for the agenda of the meeting: improved consumer financing of garments and household textiles, more pronounced style changes, special purpose garments, and consumer motivation research.

Cost of Obsolescence. A fully modernized 25,000-spindle combed broadcloth mill, producing approximately 14,000 yds per week, may have an annual savings on direct labor costs of close to $400,000, compared to a mill with obsolete equipment, James H. Hunter, president of the American Textile Machinery Association, pointed out in a recent address. "Project that saving through a completely modernized industry and you will find textile prosperity again," he said.

Sixth Day Expensive, Says Haskel. The belief that a six-day week automatically reduces costs is a fallacy, Merwin R. Haskel, president of Cohn Hall Marx and vice-president of United Merchants and

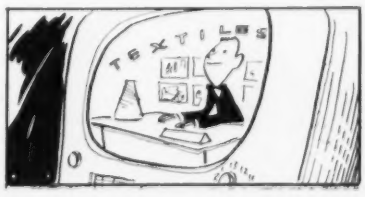
Manufacturers, told a recent meeting of the New York Alumni Club of the Philadelphia Textile Institute. In some cases it may, but in many cases the time-and-a-half paid for Saturday work more than offsets the overhead absorbed on the sixth day. Output should be based on textile merchandising rather than manufacturing capacity, he said.

Wool Duty "Intolerable." American tariffs on wool cloth constitute "an impossible scheme which has produced an intolerable situation" for British exporters and American importers, according to the National Wool Textile Export Corp., in presenting the British side of the question to the Committee for Reciprocity Information.

Revise FTC Trade Rules, Says NKOA. National Knitted Outerwear Association has recommended revision of the Federal Trade Commission's trade practice rules, which were drawn up in 1932. The association particularly wants new rules on labeling, and general agreement on the meaning of such terms as "full-fashioned," "mock fashion," "fashioning," "Shetland," "lambs' wool," etc.

Japanese Machinery to India. The Indian government has reached agreement with a delegation of Japanese textile machinery manufacturers for the import of about $11 million worth of textile machinery on a five-year credit basis.

Plug Textile Education on TV. A recent "Career Opportunities" program on WAGA-TV, Atlanta, sponsored jointly by the National Association of Manufacturers and the Atlanta Public School System, was devoted to the textile industry. Four Atlanta high school students were given the chance to question a panel from the industry on the opportunities which textiles offers to them as a career. The panel was composed of H. Redfern Hollins, director of promotion for W. R. C. Smith Publishing Co. (publishers



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They Are All at Southern Airways Company, Atlanta:

→ *The New* **1958 E18S SUPER 18**

→ *The New* **1958 D50A TWIN BONANZA**

→ *The New* **1958 TRAVEL AIR**

→ *The New* **1958 J35 BONANZA**

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→ airfleet of the textile industry

of TEXTILE INDUSTRIES), moderator; Paul V. Seydel, vice-president, Seydel-Woolley & Co.; Mrs. Nancy Calhoun, president, Calhoun Thread Co.; T. M. Forbes, executive vice-president, Cotton Manufacturers Association of Georgia; Clarence Elsås, president, Fulton Bag & Cotton Mills; and George H. Dockray, executive editor of TEXTILE INDUSTRIES.

Emergency Planning. Proceedings of a conference of industry executives on the problems which might confront industrial management and the nation in the event of an enemy attack have been published by the Business and Defense Services Administration, U. S. Department of Commerce, and are available from the Office of Technical Services, USDC, Washington 25, D. C. Price of the 36-page publication is 50 cents.

Japanese Wool Mill in Brazil. Kurashiki Spinning Co., Osaka, Japan, is constructing a 5600-spindle worsted mill at Porto Alegre, Brazil. The mill is scheduled to be completed in the early part of 1959, and will produce 12,000 lbs of yarn monthly, for consumption by weavers in Brazil.

Drycleaners' Problems. Two major causes of drycleaning complaints were discussed at a recent meeting of the Textile Analysis Advisory Committee of the National Institute of Drycleaning. The first, "silk-splits," in which the warp yarn of fabric made with a fine silk warp and a heavy filling of other fiber breaks in drycleaning, was attributed to weakness of the warp yarns, characteristic of this type fabric. The other problem, loss of color in a whole garment during drycleaning, was attributed to solvent-soluble dyestuffs.

Union Membership Up. Union members totaled about 18.5 million at the end of 1956, reports the Department of Labor, a rise of more than half a million since the last survey was made in 1954. A fourth of the Nation's total labor force,

News in Brief

What's ahead for textiles in 1958?

(A report by TI's research department)

■ "Subdued optimism" is the term used by Donald B. Tansill, president of M. Lowenstein & Sons, to describe the general feeling in the textile industry as 1957 gives way to 1958. And judging from opinions expressed by a cross section of textile executives, his phrase represents a pretty accurate consensus of the industry. The new year will not have the boom aspect of 1950, but it will be better than 1957.

Some of the signs which point to a better year for textiles: Liquidation of excess spindles continued during 1957 — about 392,000 were lost in the first nine months of the year — bringing industry capacity more nearly in line with demand; inventories at all distribution levels are low because of hand-to-mouth buying during the last two-years — during the next year retailers are expected to make more forward commitments; fiber consumption is on the upgrade as 1957 draws to a close, after a drop in consumption during the first half of the year of about six per cent overall, compared to the first six months of 1956.

The historic two-year cycle in textile activity is due to peak in 1958, although of recent years the cycle has been erractic. Likewise, the four-year cycle in per capita consumption of textile fibers is scheduled to reach a major peak in 1958 (it missed in 1954).

The textile industry's share of the consumer's dollar is historically considered to be 10 per cent. It hit a low of 7.5 per cent in 1956, and is now slowly on the upgrade. Even a small percentage change here looms large in yards and pounds of textiles in a nation whose citizens have a combined disposable personal income of over $300 billion.

Clouds on the horizon: Increasing trend in some fields away from textiles to paper and plastic film; continued tariff and import problems, despite self-imposed Japanese quota — transshipment from Hong Kong and rise of India as a textile exporter are immediate problems; continued interference by the government with the natural operations of the cotton and wool markets, although 1958 may bring legislative relief on some major sore points.

Mergers and consolidations continued during 1957, but at a reduced rate. The trend is expected to continue in 1958.

Major producers for the most part continue on a three-shift basis, but many mills closed for four days at Thanksgiving and at least an equal number have announced shutdowns of a week or more at Christmas.

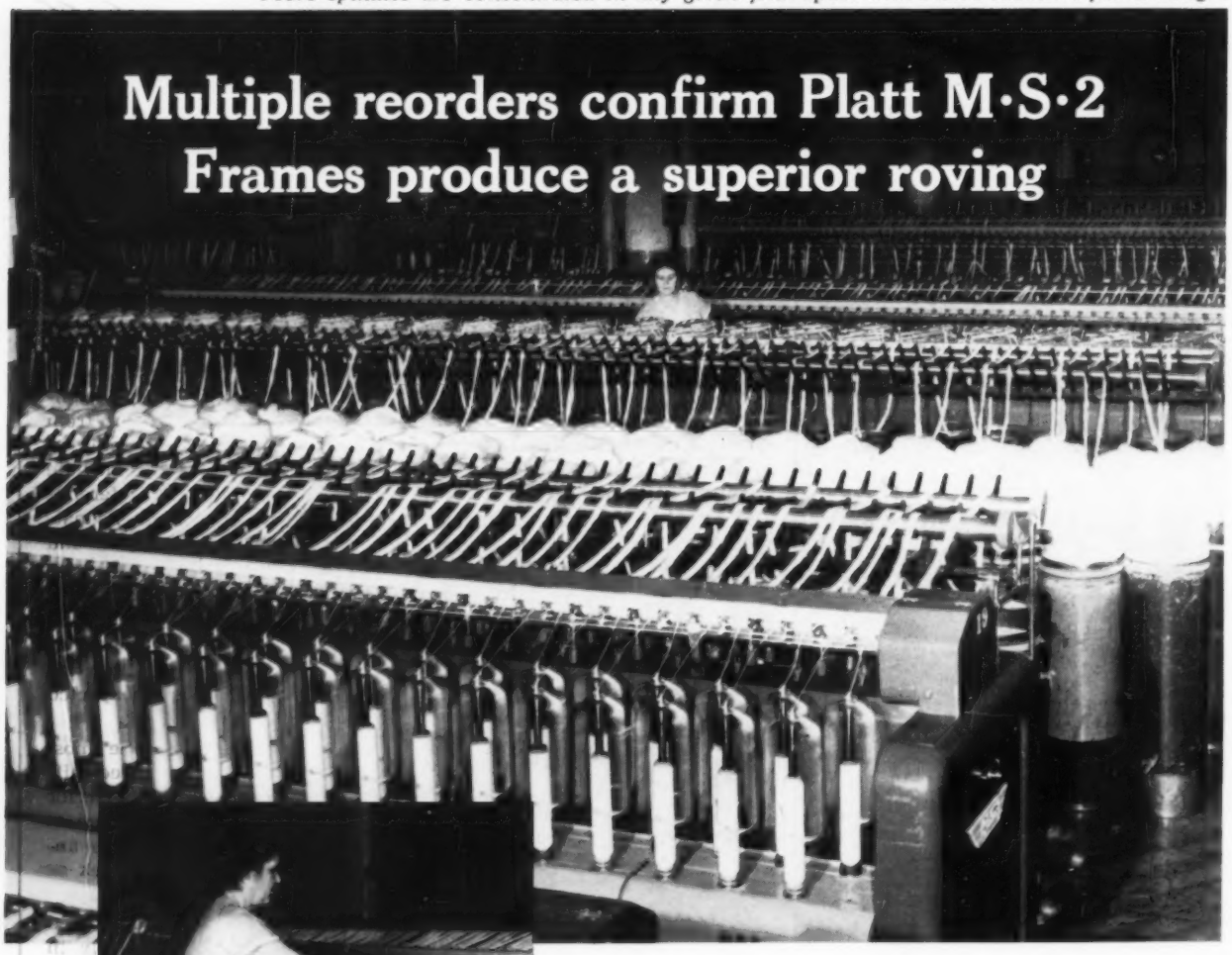
The knitting industry scored several gains in 1957, notably in men's and boys' hosiery, which marked up appreciable advances over 1956; the industry is giving these trends a push in 1958, with several major cooperative advertising campaigns scheduled. In women's hosiery, the trend away from full-fashioned to seamless is expected to continue.

Tufted carpet yardage came close to the woven carpet figure in 1957, and will probably pass it for the first time in 1958. Carpet imports, particularly from Belgium, are of increasing concern. A strong drive by the industry for increased tariffs will be launched in the upcoming session of Congress.

Relatively little change in the percentages of the market held by cotton, wool, and the man-made fibers is expected in 1958; they will probably stay close to their present proportions of about 67-7-26. Two new synthetic fibers — both acrylics — are scheduled to go on the market in 1958, Zefran early in the year and Creslan toward the end of the year.

More spindles are concentrated in any given floor space with Platt's exclusive frame design.

Multiple reorders confirm Platt M·S·2 Frames produce a superior roving



EXCLUSIVE SAFETY FEATURE: Low frames are easy to operate and cannot be inadvertently started with any guard open.

PHOTO COURTESY OF AMERICAN THREAD COMPANY

The fourth installation in three years expresses the high regard this major American mill has for Platt Roving Frames. These streamlined frames produce an even, non-stretched roving of superior quality. Vibration and sound have been cut to a minimum. This smoother operation increases the frame's life. The more even roving means fewer ends down in spinning. Before purchasing any new frames we invite you to write for information on these efficient frames manufactured by the world's largest maker of textile machinery.

ATKINSON, HASERICK & CO., INC.
ENGINEERS & AGENTS FOR THE
WORLD'S LEADING TEXTILE MACHINERY
FRAMINGHAM, MASS. · CHARLOTTE 2, N. C.

PLATT BROS. (SALES) LTD.
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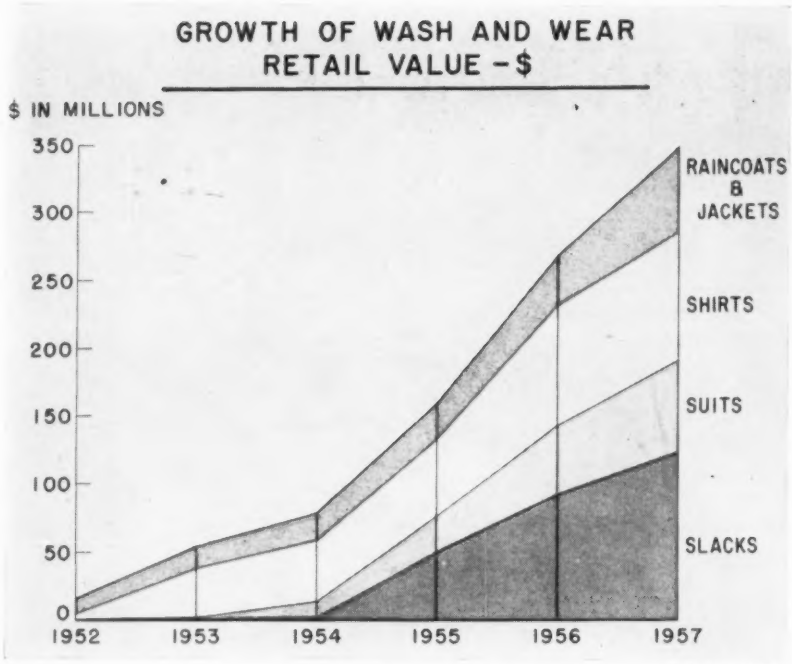
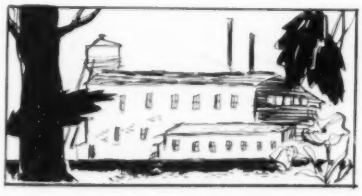
MARKETING THE TEXTILE MACHINERY MADE IN THE WORKS OF
PLATT BROTHERS & CO. LTD. DOBSON & BARLOW LTD.
HOWARD & BULLOUGH LTD.



Du Pont Co.

and about a third of nonfarm employees, are members of unions. The survey covered 189 unions, but did not include unions with membership in only one state.

Indigo, Madder, and Cutch. The Old Slater Mill Museum, Pawtucket, R. I., is to have a garden on its grounds which will include shrubs, trees, and other plants



connected with the history of dyeing and other textiles. It is being planted by the New England Unit of the Herb Society of America.

Textile Bouquet. A design patent for socks formed in a manner to resemble a flower bouquet has been granted to Grace W. Jamison and Helen H. Sherrill, and assigned to Dolly Hosiery Mills, Valdese, N. C. After the arrangement has been used as a bouquet, the socks can then serve their original purpose.

Crease-Retentive Wool. A process for producing permanent pleats and creases in wool garments has been developed at the Commonwealth Scientific and Industrial Research Organization laboratories in Geelong, Australia. The garment is sprayed with a "weak chemical solution" (exact chemical not disclosed) just before final pressing; the crease is then fixed by steam pressing for 15 seconds. The process is called "Si-Ro-Set."

Deans Tour Cotton Belt. The deans of the 16 textile colleges were guests of the National Cotton Council recently on a two-day tour of cotton producing, ginning, and marketing areas. Purpose of the tour was to show the textile educators the advances in cotton production which have been made in the past few years, and to give them an idea of further developments in sight.

Austrian Quality Label. A special quality guarantee label for woolen fabrics has been issued by the Wool Section of the Austrian Association of Textile Industries for the products of its members. To qualify, fabrics must be of virgin wool, containing not more than 7 per cent fancy yarn or 10 per cent binding warp in double cloth. They must also meet several quality tests.

Pa. Improves Tax Climate. Basic tax changes favorable to new industries and to expansion of existing industries passed by the 1957 session of the Pennsylvania General Assembly are detailed and explained in "The Improved Pennsylvania 'Tax Climate'," a seven-page booklet available on request from the Department of Commerce, Commonwealth of Pennsylvania, Harrisburg, Pa.

News in Brief

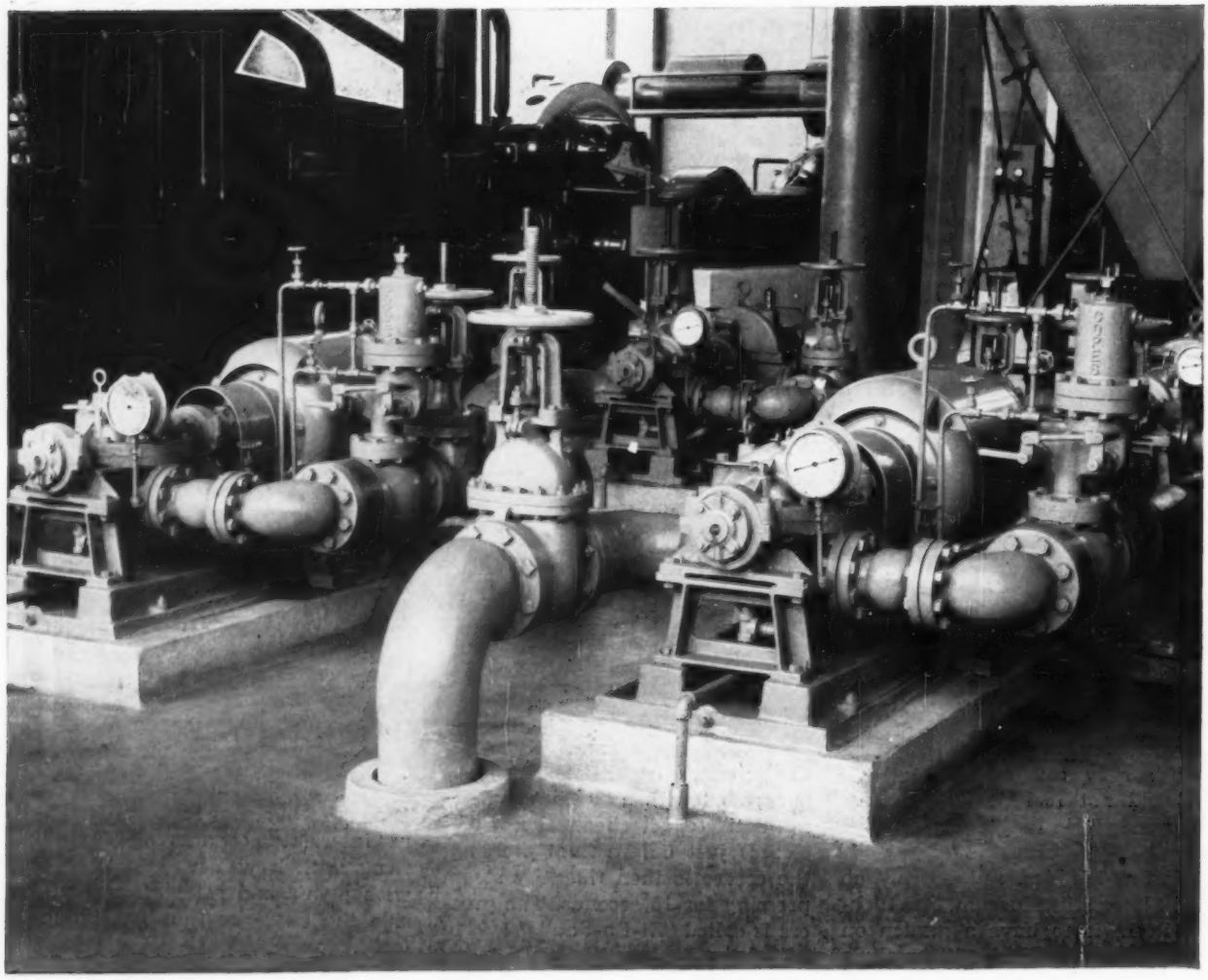
Japanese Urea Fiber. Toyo Koatsu Co., Ltd., of Japan has introduced a new fiber made of a copolymer of urea and nonamethylene diamine. Called "Urylon," the fiber is said to have a tenacity of 5 to 6 grams per denier (similar to nylon), a warm hand similar to wool, and high resistance to damage by acids and alkalies.

NYC Tax Overthrown. New York City gross receipts tax has been ruled unconstitutional as it applies to business activity wholly in interstate commerce. Textile firms with New York offices, but with plants and sales offices outside the city, are thus not liable for the tax.

International Design Protection. German textile men have proposed a uniform design protection law throughout the free world, and a registration center in Europe to supplement the Textile Design Protection Center in Japan to reduce design piracy within the industry.

The Well-Dressed Man. This is what the well-dressed man-about-town will be wearing next season if Paris designers have their way: a bright blue and white striped

"veste-chemise" — a compromise between a sport coat and a sport shirt, stovepipe trousers with three-inch cuffs, suede shoes, and

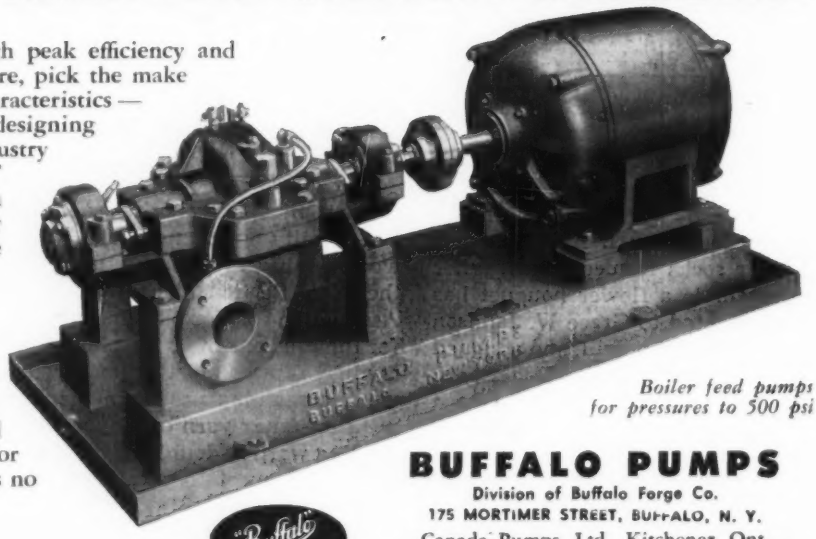


"Buffalo" Type RR Pumps on boiler feed at a large auto plant

"BUFFALO" – THE PUMPS THAT DON'T MIND BEING IN HOT WATER AND UNDER PRESSURE!

In selecting boiler feed pumps of both peak efficiency and year-after-year durability, under pressure, pick the make with the 80-year record for these characteristics — "Buffalo". This long experience in designing and building centrifugal pumps for industry has resulted in present-day "Buffalo" Pumps with every feature for maximum delivery at least power input — and for continuous service with negligible maintenance.

"Buffalo" Type RR two-stage and four-stage pumps have the typically efficient, balanced "Buffalo" impellers — the oversize bearings and shafts — the rugged casings with simply formed water passages and deep 8-ring stuffing boxes. Write for Bulletin 980 and see why we say there's no better buy!



Boiler feed pumps for pressures to 500 psi

BUFFALO PUMPS
Division of Buffalo Forge Co.
175 MORTIMER STREET, BUFFALO, N. Y.
Canada Pumps, Ltd., Kitchener, Ont.
Sales Representatives in all Principal Cities

"Buffalo"

A BETTER CENTRIFUGAL PUMP FOR EVERY LIQUID

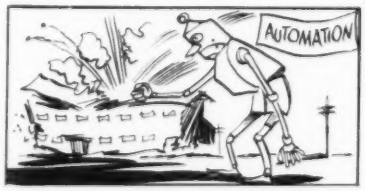
a flat-topped pork-pie hat. The clothes come in all colors, including brilliant burnt oranges, electric blues, bright red, green, yellow, and gold.

Employers Indifferent to Textile Colleges? A preliminary report on the textile education survey made by Arthur D. Little Co. says that a number of employers made suggestions for curriculum

changes which the textile deans say were actually put into effect several years ago. The deans remark that this points up the fact that too few textile executives know what is going on in textile colleges.

Staple Imports Down. Imports into the United States of man-made fiber staple for the twelve months ending July, 1957, totaled 88,123,000 pounds, compared to 118,076,000 pounds for the similar period ending July, 1956. Largest exporters to this country were West Germany, Italy, France, and Switzerland, in that order. The United Kingdom, which shipped 17,137,000 pounds to the U. S. in 1955-56, shipped only 426,000 pounds in 1956-57.

Why Mills Close? Automation, and tax laws which give manufacturers the incentive to merge or liquidate are responsible for the



closing of some 1,000 mills and the loss of 300,000 textile jobs in the past six years, according to William Pollock, general president of the Textile Workers Union of America. In a counter proposal to F. E. Grier's suggestion that mills go on a four-day week for six weeks and then a five-day week for a year [see TEXTILE INDUSTRIES for December, 1957, p. 69], Mr. Pollock suggested that the industry adopt a 35-hour week, with 40 hours' pay.

Labor Views Differ on Tariffs. Stanley H. Ruttenberg, research director for AFL-CIO, endorses a freer trade policy, and recommends that "the recent trend toward injection of ever tighter protectionist features in our tariff procedures and policies" should be reversed by permitting U. S. negotiators a freer hand in future tariff-cut meetings. On the other hand, Solomon Barkin, research department, TWUA (AFL-CIO) recommends "a more restrictive policy on textile imports than is assumed by the present legislation and the administration."

Gin Damage Studied. At a recent meeting of the Industrywide Committee on Cotton Quality, a three-point program for achieving a solution to the problem of spinning quality of cotton, as affected by ginning practices, was approved. The program includes development of a comprehensive research program for identifying and measuring fiber properties as they relate to spinning performance, commercial-scale testing program to evaluate effect of ginning practices on spinning performance, and continued information and education programs.

News in Brief

Household Textiles Lose Out. Out of $346 the average American family spent last year on home furnishings and equipment, only 9 per cent went for textiles, reports *Life*. Upper income groups spent $156 for household textiles, compared to an average of $29 for all groups.

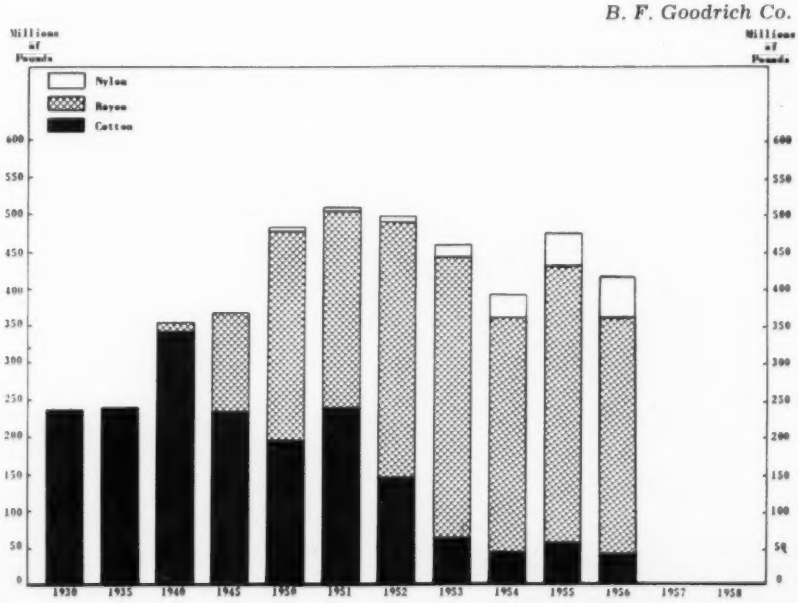
India Textile Threat? Indian textiles present a growing threat to the American textile industry — and to the Japanese — warned

Halbert M. Jones, president of Waverly Cotton Mills, Laurinburg, N. C., and vice-president of the American Cotton Manufacturers Institute, in a recent address.

Union Housing Project. Textile Workers Union of America has

U.S.A. textile consumption in all types of tires, 1930-1956.

B. F. Goodrich Co.



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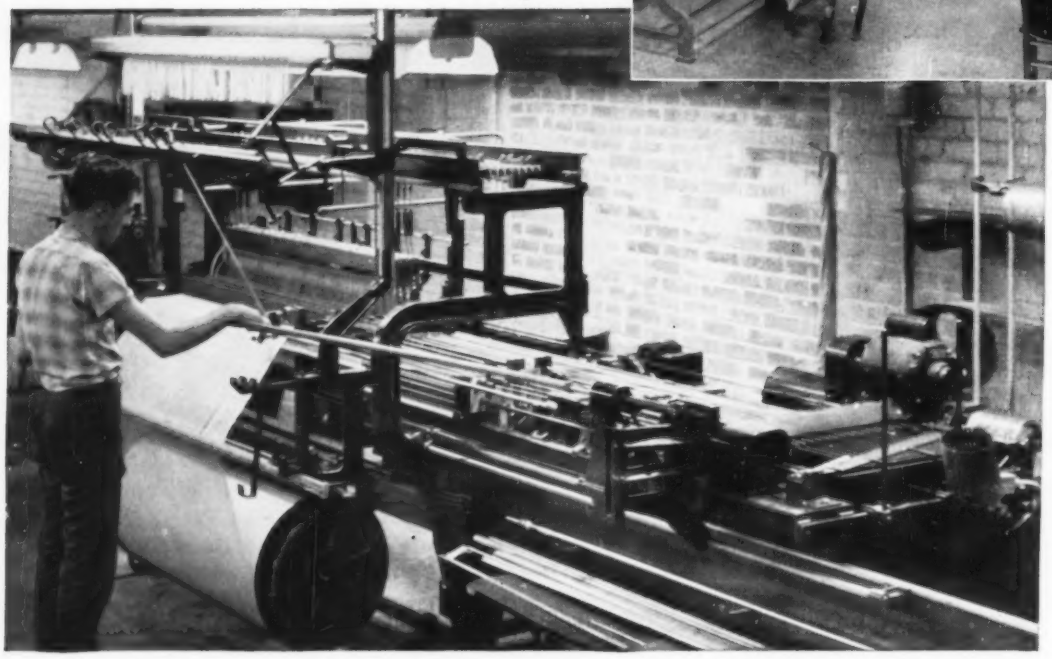

WE SUGGEST YOU LOOK INTO THE

BARBER-COLMAN
WARP DRAWING MACHINE

With this machine, the time-eating task of drawing-in is speeded up tremendously. A power-driven needle, running at 127 to 230 strokes per minute (depending on the number of weaving elements to be entered), draws each thread in succession through the correct selection of drop wire, heddle, and reed dent. This correct selection is made accurately *and automatically* for each pick by a sequence of mechanical actions controlled by a pattern strip punched in accordance with the designer's draft. Very substantial reductions of drawing-in costs are possible, particularly on patterned goods such as stripes, plaids, and fancy weaves. This *modern method* of replacing warps has enabled many mills, both large and small, to meet the ever-increasing demands for a greater variety of patterns. *Your Barber-Colman representative is qualified to advise you on possibilities in your mill.*

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • WARP DRAWING MACHINES

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announced plans to build 100 or more houses in the $8,500-$9,000 bracket on 37 acres acquired in Erwin, N. C. The union expects to do the building with an FHA loan.

Rayon from Bamboo. A plant to produce rayon from Indian-grown bamboo is to be constructed in India by a combine of Japanese firms.

Yarn Men Give Scholarships. Scholarships valued at $300 annually will be given at the textile schools of N. C. State College and Clemson College by the Carolina Yarn Association.

(More News Briefs on Page 123)

MERCHANDISING NOTES

National Cotton Week poster for 1958 will feature this modernistic design in four colors.

Du Pont Co. is cooperating with the Better Hosiery Council promotional work by scheduling a number of color advertisements for socks in *Life, Esquire, New York Times Magazine,* and *Parents' Magazine.*

Dow Chemical Co. has announced that the first men's and women's apparel items of Zefran nitrile alloy fiber will be in New York stores next fall. The first fabrics to be marketed will use Zefran in blends with natural fibers, although future emphasis will be on 100% Zefran fabrics.

National Association of Hosiery Manufacturers is urging all manufacturers of socks and anklets to participate in the Seal program of the Better Hosiery Council.

Scott Paper Co. has announced development of a cloth-like material, called "Dura-Weve," which is claimed to combine many of the best properties of paper and textiles. It consists of a laminate of rayon scrim with two or more plies of high wet-strength paper. Products now on the market include headrest covers for airlines and railroads, hand towels, tablecloths, disposable examination garments for clinics and hospitals, and sterile drape sheets for operating rooms.

"Life" magazine, after surveying family spending for home furnishings and equipment, reports that the composite best customer for removable floor coverings is the head of a household in his 40s, who lives in a suburb of a large western city, is a business executive in the upper income bracket, has some college education, and has children 10 to 19 years old.

National Foot Health Council reports that some common foot ailments can be alleviated by wearing socks of medium weight mercerized cotton yarn.

Washington Mills is making T-shirts, sweat shirts, and sleepwear for children, with TV cartoon character Woody Woodpecker screen printed on them, in a promotional tie-in with a multi-million-dollar TV sales effort of the Kellogg Co.

Interested shoppers at Bloomingdale's, New York department store, watch as Swedish Countess Ebba von Eckerman (right) and sister, Countess Elizabeth von Scherwin, show how Ripsa Original hand-loomed wool skirting is made.

Colgate

SURFACE ACTIVE AGENTS

Have Many Uses In Textile Wet Processing

COLGATE

ARCTIC SYNTEX 036

A 100% Liquid Non-Ionic Surface Active Agent. For Use Where An Efficient, Economical Cleaning, Scouring, Wetting, Penetrating and Emulsifying Agent Is Needed.

Compatible with anionic, cationic and other nonionic chemical substances, ARCTIC SYNTEX 036 is not inactivated by acids, alkalies, oxidizing or reducing agents; or by most organic ions. Stable for long periods at high temperatures. Will not form salts with metal ions. Very effective at low concentrations. Stable and effective in both hard and soft water.

CHEMICAL ANALYSIS:

	Per cent as received
Active Ingredient	99+
Moisture	0.5 max.
Ash Content	0.1 max.

STABILITY:

Hard Water	Unaffected
Metal Salts	Unaffected
Alkalies	Unaffected
Acids	Unaffected
Oxidizing & Reducing Agents	Unaffected

Recommended For Use In Textile Processes or Compounds: (1) Where emulsification and removal of oil and grease are desired or are problems. (2) In acid or alkaline solutions where other surface active agents may be inactivated. (3) In hard water or solutions of metal salts. (4) In combination with other anionic and cationic agents and other surface active or nonsurface active agents.

COLGATE

MENTOR BEADS

Heavy Gravity 60-lb. Bags

Low Density 30-lb. Bags

Spray Dried Neutral Alkyl Aryl Synthetic Detergent. Provides Excellent Wetting, Penetrating, Foaming and Dispersing Properties in Hot or Cold, Hard, Soft, Alkaline or Acid Waters.

A high-molecular-weight alkyl aryl sulphonate-type detergent, MENTOR BEADS has many uses in textile processing including: Wetting Out, Desizing, Kier Boiling, Degumming, Rayon "Boil Off," Bleaching, Fulling, Scouring, Dyeing, Washing After Dyeing, Print Washing, Finishing, Softening, Etc.

CHEMICAL ANALYSIS:

Active Ingredient		.40
Moisture		2.5%
Density or Apparent Gravity (Average)	Light	.20
	Heavy	.40

STABILITY:

Hard Water	Clear up to 550 ppm hardness
Acid—Boiling .25% in Sol. of pH-1	Stable after 5 hrs.
Alkali—Boiling .25% in Sol. of pH-13	Stable after 6 hrs.
Boiling Water	Stable
Atmospheric Oxidation	Stable

NOTE

For more detailed information on either or both of these Colgate Products, write to:

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AN EXECUTIVE Views

THE NEWS IN TEXTILES

Prepared by a man who is closely identified with the textile industry.

Are the gins ruining cotton?

IN THE November issue of TEXTILE INDUSTRIES, a textile executive in an authoritative manner condemned all cotton gins using a saw-type cleaner. His article reminds one of the aphorism: "According to aerodynamic theory it is impossible for a bee to fly." It would take a real genius to be able to look at a diagram, as this man has done, and draw the conclusions that he has expounded —and be right.

The licker-in type cleaner is the most effective cleaner used in any single segment of the textile industry. In 1933 the Shirley Institute described what is accepted throughout the world's textile industry as standard for waste analysis. The Shirley Analyzer uses a licker-in, feed plate, and grid bar. Is it not possible to build a machine which will do this on a commercial scale outside of the textile mill?

The ginning industry is progressive. Few mill men will accept this statement. A former mill man who grew up with the loose descriptions such as "gin-cut," "gin-damage," etc., when asked by ginners to describe this condition, could not. The textile industry is famous for buck-passing. The weave-room runs badly because of poor yarn, the spinning room makes poor yarn because of poor roving, the poor roving is due to the sorry cotton the buyer shipped to the mill. The sorry cotton is due to the "gin-damage."

MILL MEN do not realize that ginning is as much a part of the farming operation as harvesting the cotton. Very, very little cotton is sold in the field. Cotton is not merchandise until it is in bale form. Why does the damage necessarily start and end in the gin?

As it was stated previously, the ginning industry is progressive. How many mills would modernize every four or five years if they operated less than six months each year? It is not unusual for a gin to spend 10% of its total value on new equipment each year. Gins thrive on competition because they sell service. The farmer will go to the gin that can produce the best staple and the best grade with the best lint percentage. Farmers are fickle. If they think a gin ten miles down the road produces better, that is the gin with the most business.

Why do mill men think of ginners as villainous, with only one evil desire—to destroy the value of the cotton to the mill? Nothing could be further from the truth.

The writer of this article is out of the textile industry — college, mill, laboratory, and now gin machinery. If the textile executive writing for TEXTILE INDUSTRIES could visit some of the gins across the belt,* chances are he would be more open-minded. He might, if he is still active in the industry,** show a willingness to conduct a few experiments that would enable him to write on the basis of fact rather than fiction. It happened to *this* ex-mill man.

He found ginners open-minded and willing to try anything that would help their operation. If the ginner saw a demonstration that successfully proved a better job was being done by a machine, he bought it, regardless of cost.

How does one measure licker-in damage on a card? It has been proved by research agencies that changes in speeds and settings of the licker-in could change the quality of carding. Mostly this has been a measure of neppiness and resulting yarn quality. This is not a measure of fiber damage, however. Had the licker-in been operated independently of the cylinder, flats, and doffer, these neps could not be measured.

LINT CLEANERS do not grind up the trash as this man would have us believe. When pin or pepper trash is left in the cotton, it is

*He has.—The Editors.
**He is.—The Editors.

WATCH FUTURE ISSUES

for more comments on this

In addition to the reply to "How to Ruin Cotton" which is reproduced here, the Editors have received two other extensive comments on the original article. These will be published later.

One of the articles was written by Claude L. Welch, director of the Division of Production and Marketing, National Cotton Council; the other was written by E. J. Overby, director of the Cotton Division, Agricultural Marketing Service, U. S. Department of Agriculture, and the USDA's chief of cotton ginning research, Dr. E. G. McKibben.

Opinions of other readers are invited.

Announcing

Cocker's Unit Construction Heavy Duty Padder

Unit construction—heavy cast iron frames—heavy duty, self-aligning roller type roll bearings—and 16" diameter main rolls permit direct loading up to 10 tons. This Cocker machine is unexcelled for heavy duty padding of dyes, starches, and finishes.

Either low or high capacity 3/16" stainless steel jacketed pans can be furnished with open or with closed coils. Integral mounted expander rolls and cloth guides attached to the machine can be furnished with open or with closed coils. Integral mounted expander rolls and cloth guides attached to the machine can be furnished if desired. Available in widths up to 120 inches.

We will be glad to give you full information on this new Cocker machine.

THE LEADER COCKER AROUND THE WORLD

Plant and Offices at Ranlo, N. C. (Mailing address, Gastonia, N. C.)

Machine and Foundry Co., Gastonia, N. C.

WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE WARP PREPARATORY EQUIPMENT

because the lint cleaner has taken everything but the fine stuff out. Air is an important factor in every cleaning machine, even the card. Control of the air in the card is so important that one point out of control results in the most uneven work possible. The success of the lint cleaners is due as much to the control of the air as to the mechanical components.

The job that the lint cleaner is called on to do becomes more complex every season. Labor involved in harvesting necessitates mass gathering. Stripping and machine picking account for a greater percentage each season. This means that more trash and foreign matter, wetter cotton, and other problems are forcing the ginner to add machinery to obtain the quality demanded by the industry.

If the ginner is so efficient that Good Ordinary grade becomes a Low Middling grade, this should be to his credit. If the mill does not like this new grade, it should adopt some method other than visual to isolate the cotton it does not like.

Grade was once a good indication (the best available) of the running quality one could expect in the mill. There were good running days and bad. These conditions were accepted. Now because a gin can turn out most of its cotton looking alike, it is condemned for this rather than commended for its good work. The difference is that the mill cannot separate the good cotton from the bad within a grade without aids to the eyes of the cotton buyer. Those mills who are operating with the assistance of their fiber laboratories can do this.

NO ONE MILL MAN can stop the march of progress by bleating over the changing times. He cannot condemn people who are earnestly striving to improve conditions, people who realize that the cotton industry has a sickness that

can only be cured by united effort, people who strongly desire to work with others for the common good of all. To stand on a soapbox and preach is the work of an idle mind. For this gentleman's information we would like to answer his claims one-by-one.

First, the lint cleaner does not work from a compressed lap of cotton but a soft batt that is made up of the most open cotton that the mill will find, short of the card web.

Second, the lint cleaner which this gentleman refers to is based on developments within a single gin, and the inventor never heard of Bernie Gordon or Mr. Hay and their machine. The inventor did base much of his initial work on the working principles of the licker-in.

Third, the broad statement

Report tells why United Elastic won "excellent management" award

■ SUCCESS in a highly competitive field has brought the award for excellent management to the United Elastic Corporation, the American Institute of Management, New York, disclosed recently in a detailed study of the company.

Makers of elastic fabrics for the textile industry, United Elastic faces not only the competition from rival firms, but the ups and downs of the textile industry it supplies. Despite this, AIM has found the corporation to have maintained a healthy growth, a steadily rising return to its shareholders, and a stable financial position.

United has paid a dividend every year since its incorporation in 1927, and every year since 1894 counting its predecessor.

Practically all of United Elastic's income has derived from products developed or improved by the company's own research department, which is another reason the Institute has rated the company highly in the comprehensive management audit of performance. AIM looks at every responsibility of management in ten basic categories in deriving its comparative ratings. United Elastic rated excellent in all ten in scoring 7800 of a possible 10,000 points.

Harold W. Conant is chairman and president of the Easthampton, Mass., company which now has ten plants, including one at Montgomery, Ala. (West Boylston Mfg. Co.). United Elastic is now the largest and oldest elastic fabric manufacturer, and it has become the only fully integrated company in the business by producing its own basic yarns and rubber threads.

According to the Institute, several aspects of United Elastic's operations warrant special attention:

1. The decision of management to integrate its operations has assured the supply of essential rubber thread and cotton yarns. Since a portion of the production of both subsidiaries is sold on the open market, the company broadened the base from which its earnings are derived.

2. The success of United Elastic must be credited, in part, to the support given to product development and testing.

3. The company's retention of a substantial part of earnings throughout the years, has enabled it to expand without recourse to heavy debt.

Improvements in this excellent management can strengthen the company for its future growth, in the Institute's opinion.

1. Additional communications should be established between the home office and the plants.

2. Second echelon officers can be given other assignments to develop their administrative abilities and knowledge of company operations.

3. Younger men should be considered for the directorate as board vacancies occur.

4. More outside representation can be added to the board either through an increase in the size of the directorate or through nomination of non-management replacements.

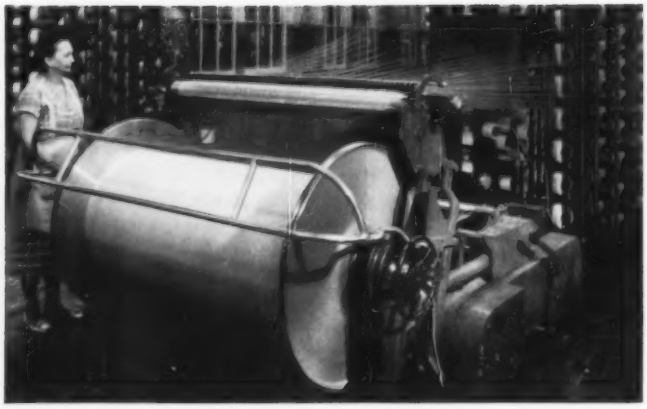
5. The company would benefit by establishing a mandatory retirement age for executives.

6. The company should consider the future appointment of a controller, responsible for over-all cost control and reporting directly to the president.

7. A full program of executive training would give the company greater security in management continuity.

what are you doing to

CUT EXPENSES and BEAT COMPETITION ?



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This Hayes Giant 38" x 54½" Aluminum Section Beam for cotton and spuns improves efficiency, cuts expenses and helps mills beat competition.

One 38" Hayes Beam does the work of two 28" beams.

Saves one-half the handling time.

You handle half as many beams for the same production.

Smooth, true-running, no splintering and no distortion due to atmospheric changes.

Balanced to run up to 1,000 yards per minute without objectionable vibration.

Insures better warps.

Lightweight, 195 lbs.

Capacity, see chart below.

Fits all current types of warpers.

HERE'S PROOF !

Seventeen mills in the United States and Canada have purchased production quantities of this Hayes Giant 38" Aluminum Section Beam, especially designed for cotton.

And here are actual figures from one large cotton mill, showing yarn put on this Hayes Giant 38" Aluminum Section Beam. *NOW!* If these figures show an advantage in savings and increased production for *YOU* and *YOUR MILL*, we suggest your serious consideration of *HAYES BEAMS.*

Write us about your needs today.

WARP	ENDS PER BEAM	YDS. ON BEAM	* YDS. ON CHEESE	WEIGHT OF YARN
30S	416	68,000	136,000	1164 lbs.
26S	356	64,000	128,000	1043 lbs.
24S	369	60,000	120,000	1098 lbs.
22S	377	56,000	112,000	1142 lbs.
19-5S	384	50,000	100,000	1172 lbs.
13S	350	36,000	72,000	1152 lbs.

* 6 lb. Cheese

Our skilled engineering staff is available to assist you with your problems.

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"every spinner in the world" knows that this principle is injurious to cotton hardly needs answering. A few progressive spinners are wanting to install this machine in their mills. A few more want the addresses of gins with this lint cleaner in order that they may buy that cotton.

Fourth, those mills that installed the initial saw-type lint cleaners actually installed gin saw cleaning cylinders, not licker-in wrapped wire cylinders. A few were even convinced the lint cleaner with the gin saws did a good job.

Fifth, the "trash hider" idea is absurd if one would think about it. Much cotton is graded not on its nonlint content, but on preparation and color. If a rough bale is smoothed out, it can easily be upgraded without a single piece of trash being removed.

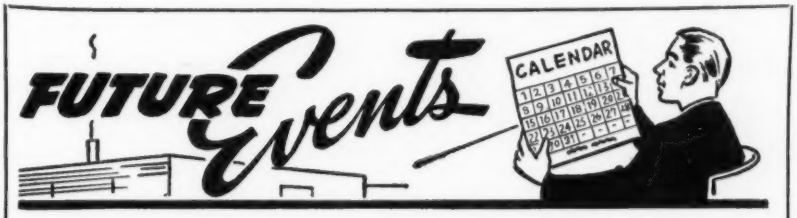
Sixth, many, many gins in Mexico are now equipped with American-made lint cleaners. In fact, two Central American countries have gins with the lint cleaners objected to by this textile executive.

Lastly, after having worked in the Canadian mills, the writer would like to assure this executive that price is still the strongest determinate for the purchase of cotton.

AS TO THE OBSOLESCENCE of the cotton grading system, there is little argument that any business which depends solely on visual grading in this age of instrumentation is rapidly approaching obsolescence. Laboratory methods of fiber evaluation are improving, and acceptance is much more prevalent today than at any period in history. With this acceptance there will follow more rapid methods of testing, and eventually there will be universal acceptance of length, perimeter, and strength measures of cotton.

Finally, in defense of the company building the lint cleaner, which has been criticized so vociferously in the November issue, a complete fiber and spinning laboratory is in the manufacturing plant. After each installation, samples of cotton before and after the lint cleaner are tested. During the 1957 cotton season more than 4,000 samples will be tested from gins all over the Cotton Belt and through Mexico. The results of these tests are available for anyone to see.

Perhaps a visit by this textile executive might convince him that a machine that would not work on a card forty years ago can have its principles adopted and used commercially today. It must be true, because more than half of the gins in this country are using some type of lint cleaning today.



1958

Date	Event	Location
Jan. 24	Hudson-Mohawk Section AATCC	Albany, N. Y.
Jan. 24-25	Piedmont Section AATCC	Clemson House Clemson, S. C.
Jan. 30-Feb. 1	Textile Div., American Society for Quality Control annual conference	Clemson House Clemson, S. C.
Feb. 7	New York Section AATCC	New York, N. Y.
12-14	Cotton Research Clinic	Carolina Hotel Pinehurst, N. C.
15	Mid-West Section AATCC	Hotel Bismarck Chicago, Ill.
21	Niagara Frontier Section AATCC	Buffalo, N. Y.
Mar. 6-7	Textile Quality Control Association	Poinsett Hotel Greenville, S. C.
13-14	Southern Textile Methods & Standards Association	Clemson House Clemson, S. C.
18-21	A.S.T.M. Committee D-13 spring meeting	Sheraton Park Hotel Washington, D. C.
Apr. 10-12	American Cotton Manufacturers Institute annual meeting	Hollywood Beach Hotel Hollywood, Fla.
16-18	Alabama Textile Manufacturers Association annual meeting	Hotel Buena Vista Biloxi, Miss.
21-22	National Association of Hosiery Manufacturers annual meeting and Hosiery Industry Conference	Hotel Roanoke Roanoke, Va.
23	The Textile Institute annual meeting	Nottingham, Eng.
23-26	Cotton Manufacturers Association of Georgia	Boca Raton Hotel & Club Boca Raton, Fla.
24-26	Phi Psi Textile Fraternity annual convention	Philadelphia, Pa.
Apr. 30-May 1	The Fiber Society	Clemson House Clemson, S. C.
May 1	Underwear Institute annual meeting	Hotel Biltmore New York City
3	Alabama Textile Operating Executives Slashing & Weaving Discussion—9:30 A.M.	Thach Auditorium Auburn, Ala.
6-8	Canadian Textile Conference	Queen Elizabeth Hotel Montreal, Que., Can.
19-24	National Cotton Week	
June 5-7	Tufted Textile Manufacturers Association annual meeting	Daytona Plaza Hotel Daytona Beach, Fla.
19-21	Southern Textile Association annual convention	Grove Park Inn Asheville, N. C.
Sept. 11-12	Combed Yarn Spinners Association annual meet	The Cloister Sea Island, Ga.
25-26	Northern Textile Association	Wentworth-by-the-Sea Portsmouth, N. H.
Oct. 1-2	Chemical Finishing Conference	Washington, D. C.
6-10	Southern Textile Exposition	Greenville, S. C.
15-25	International Textile Machinery Exhibition	Belle Vue Manchester, England
Oct. 30-Nov. 1	AATCC National Convention	Hotel Conrad Hilton Chicago, Ill.

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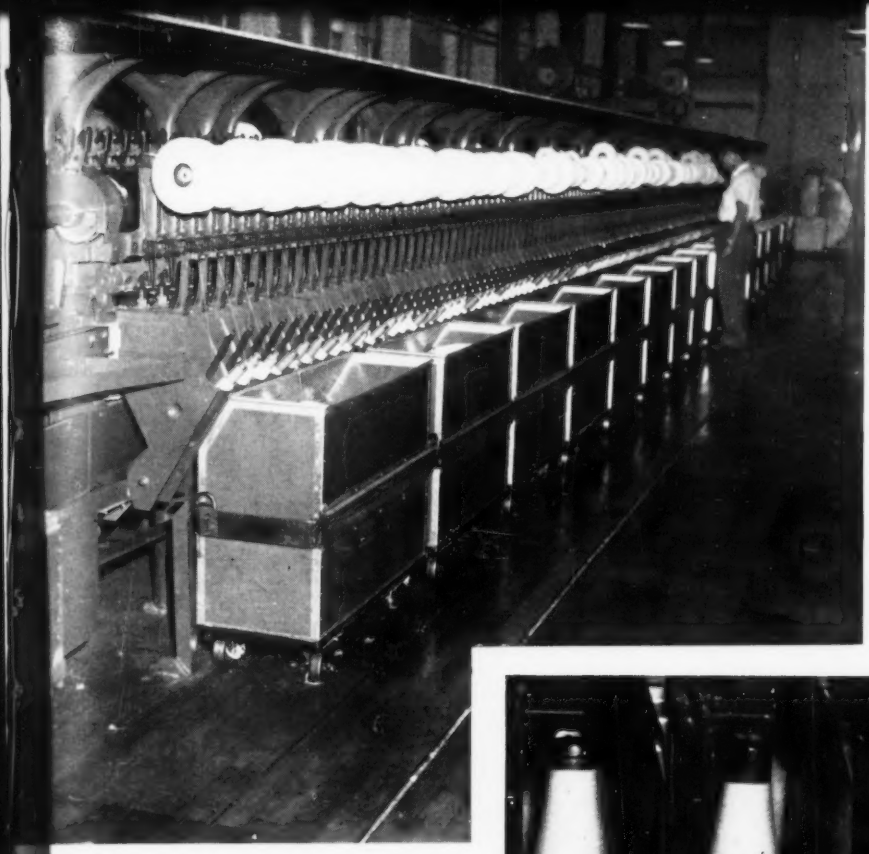
Textile Industries
FOR JANUARY 1958



Spring-bottom boxes (left) fit in place of trough usually found on spooler. The mobile boxes serve as doff boxes, storage boxes, and spooler tray, thereby reducing handling costs. The boxes can be hooked together side-by-side or end-to-end.

This spooler is reported to be the first Type C to be modified with pockets large enough to handle 12¼ x 2¾ Gwaltney bobbins. Note comparative size of bobbin formerly accommodated by Type C spooler in photograph below.

Type C spooler handles SG-1 bobbins

Staff prepared

Exclusive

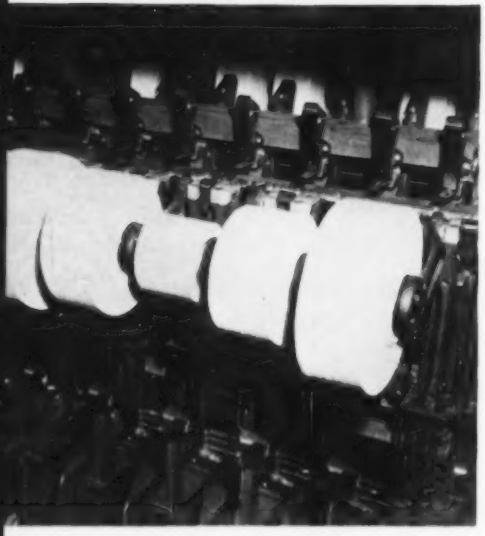
Unique spooler cuts yarn handling

A UNIQUE Barber-Colman spooler is in operation at Dan River Mills, Inc., Danville, Va. Basically a Type C spooler, the unit has 288 bobbin pockets which accommodate 12¼" packages made on 2¾" rings.

The unique features of this special spooler include large bobbin pockets to permit use of large packages from spinning, reduced handling by using special bobbin boxes which are placed at the spooler in place of the usual bob-

The spring-bottom bobbin boxes have hooks affixed to fasten them together either side-by-side or end-to-end so as to permit them to be pushed or pulled about in a train.

Knotter feeler permits two different diameter cheeses to be run simultaneously; for example, an 8-inch cheese can be run on one side and a 7-inch cheese run on the other.



The modified spooler is equipped with an improved vacuum system having its main ducts in the room below. Note clean conditions and the absence of congestion under the spooler.

bin troughs, and cheese feelers which control cheese size accurately.

This spooler was built especially for Dan River Mills and includes the features specified by the mill. A spring-bottom bobbin box acts as a doff box, storage box, and spooler tray, thereby reducing handling costs. The large Gwaltney frame bobbins are not usually run on Type C spoolers. Type D spoolers usually handle these large bobbins. This spooler is reported to be the first Type C with pockets large enough to handle Gwaltney bobbins.

Type C spoolers at Dan River are used largely for cheeses made for dyeing, while Type D spoolers are made to obtain maximum package size from large bobbins. Dan River considers the Type C cheese to have a better traverse for reduced end breaks and better warping. Mill officials felt there were sufficient advantages in the Type C spooler to have this special machine tailored to order for specific requirements in this instance.

REDUCED HANDLING of bobbins is an important advantage permitted by the new arrangement. The spring bottom boxes (made by Fisher Mfg. Co., and sold by Textile Specialty Co.) are used to doff from spinning frames. These boxes are stored until an operator is ready to push them directly to the spooler. The doff boxes are located at the spooler in the space usually occupied by bobbin trays, which were omitted in the construction of this special spooler.

The storage space required for bobbin boxes is about the same as formerly. The new boxes, which were designed especially for spoolers, and on which design and mechanical patents are pending, have hooks affixed to fasten them together side-by-side and end-to-end, which facilitates pushing or pulling them about in a train or in any way desired.

The method of handling bobbins for the older spooler was to use a doff box which held all of the bobbins doffed from one spinning frame. The doff box was emptied into a larger box for storage until the bobbins were needed at the spooler. When needed, the large box of bobbins was brought to the spooler room, where dump buggies were filled prior to loading the spooler troughs (the dump buggies held about 400 bobbins).

This method of operation was time-consuming and required too much handling as compared to the present method of operation. The respacing of spinning frames has also contributed to the new method of handling.

Vacuum heads such as used on other type spoolers are located as usual but the vacuum manifold has smaller tributary pipes which meet on the ceiling level of the room under the spooler room, thereby eliminating congestion of ductwork under the spooler on the floor where cleaning is now easier and needed less frequently.

A knotter feeler is automatically set by a mechanical device to allow two different diameter cheeses to be run simultaneously. For example, an 8" cheese may be run on one side while a 7" cheese is being made on the other side.

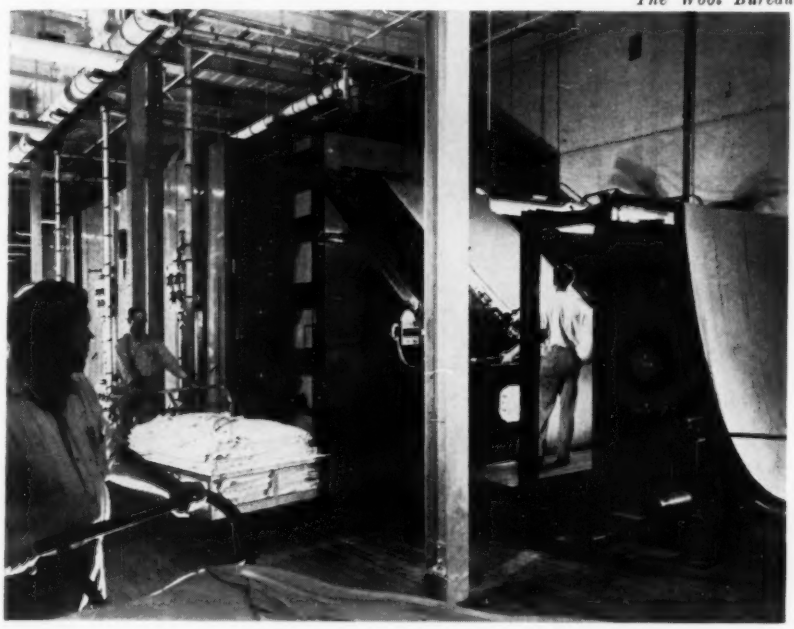
This modified spooler is used on work ranging from 21s carded to 40s combed yarn, and knotter speed is the same as on regular Type C spoolers. Drum speed is set at 1220 yards per minute. This installation has been giving excellent results, and the accomplishment is attributable to the progressive attitude encouraged at Dan River Mills.

For your 1957 index

of articles published in this magazine, turn to page 199. Reprints of this subject index are available as long as the supply lasts. Write to The Editors, TEXTILE INDUSTRIES, 806 Peachtree St., N. E., Atlanta 8, Ga.

Beginning with this issue, TI will be indexed in the new "Applied Science & Technology Index" (formerly the "Industrial Arts Index") published by the H. W. Wilson Co., 950 University Ave., New York 52, N. Y.

Imperfections in tentering are numerous, but not of too serious a nature. They include stains, "half-moons," incorrect width, uneven moisture, double selvages, and dryer stop marks. *The Wool Bureau*



The causes of imperfections in dyeing and finishing woolen and worsted fabrics and how to correct them

FABRIC DEFECTS IN WOOL FINISHING

Part 2—Dry Finishing*

by Richard G. Stoehr
Vice-president and general manager
Botany Finishing Co.
Passaic, N. J.

Exclusive

WITH A FEW exceptions, such as physical damage, imperfections which occur in dry finishing are not as serious as those in wet finishing. The reason for this is that they are more easily corrected and the imperfections are not accentuated by dyeing as are most of the wet finishing errors.

Generally, what is done wet remains to a certain extent, but what happens dry can be corrected by going back to the wet state and refinishing.

Naturally, from the standpoint of both economy and quality both types of imperfections must be avoided by eternal vigilance.

TENTERING

Imperfections in tentering are numerous but not of too serious a nature; they are listed below, with their causes and methods of prevention.

Stains

Improper cleaning of machine—good policy is to run wet rags through machine to pick up any loose greasy wool before starting up the machine.

Half-Moons

Improper pinning on the tenter chain. Sections that are not pinned on one side bow and create half-moons. These are removable by wetting out and refinishing.

The opposite to this occurs when the selvage guide does not operate and the cloth is pinned in too far. This condition can usually be corrected by wetting out the cloth, which closes up the holes caused by the pins. Sometimes, however, the tension is considerable, which distorts the cloth, creating an imperfection which cannot be rectified.

Incorrect Width

Normally cloth is dried two inches wider than the wet width. This tension is necessary to keep the cloth on the pins and to prevent the cloth being blown into gears, etc.

Fabrics of incorrect width, either wide or narrow, can only be wet out and retentered.

Uneven Moisture

Uneven moisture prior to tentering can result in several faults. First, uneven width in the dry cloth — dry places not being brought and kept to the same

*Fabric defects in the wet finishing operation were discussed in Part 1 which appeared in the December, 1957, issue.

width as the wetter portions.

Second, variation of shade—heat necessary to dry the wet cloth will attack and change the shade of the dryer places in the cloth.

Third, in the case of union dyes—the uneven moisture causes bronze bars, which are concencentrated lakes of color. Since these bars are caused by uneven moisture, a thorough wetting out evens out the bars. Prompt drying after thorough, even extraction prevents a recurrence of the bars.

Double Selvage

These are usually caused prior to tentering, in either fulling or scouring, by rolling selvages. Either a tightly dressed selvage or poorly tacked selvage will roll. However, it is possible that the selvage will double when being pinned, and dry in that position.

If caused before drying, selvages generally have to be opened by hand to break the felt before wetting out. Otherwise, wetting out and careful retentering will straighten out selvages.

Stop Marks

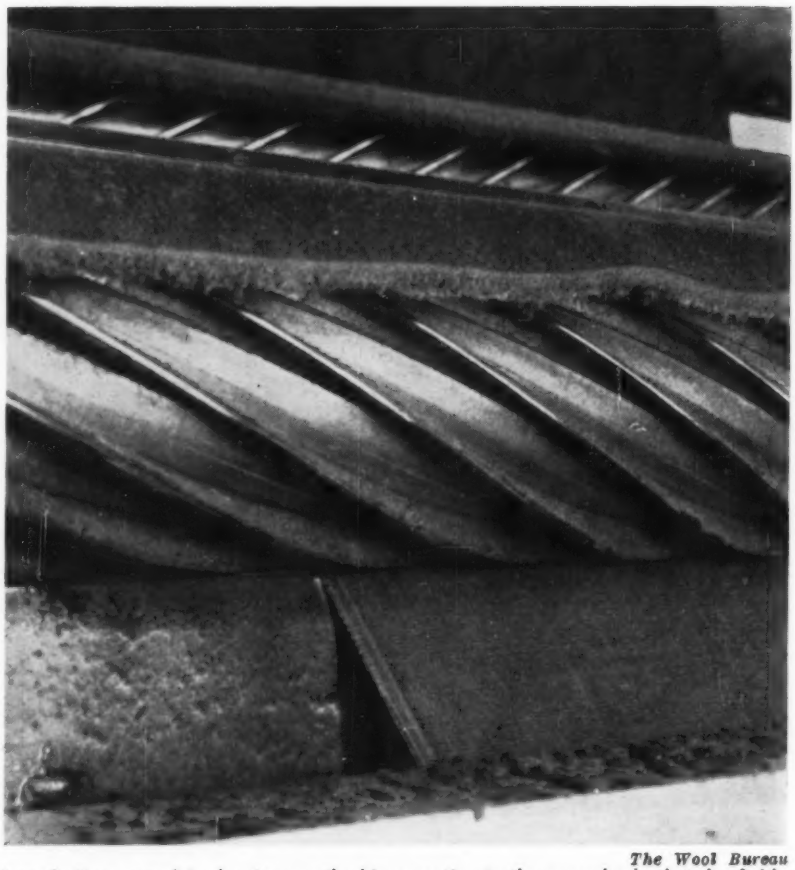
As the name suggests, impression marks are caused by stopping the dryer. Later type machines are so constructed that the cloth does not contact any roll in the machine which could cause these stop marks. They are also corrected by wetting out.

Discoloration of Whites

Excessive heat will yellow woolen fibers; therefore, temperature and exposure time must be carefully controlled in drying ivories and all other white goods. Rebleaching removes this yellowness if it is not too great; otherwise, the only thing is to redye into a dark shade.

SHEARING

Imperfections caused in shearing are the big exception to the general rule that dry finishing defects are less serious than wet finishing defects. Imperfections caused by shearing usually involve physical damage.



The Wool Bureau

Imperfections caused in shearing are the big exception to the general rule that dry finishing defects are less serious than wet finishing defects, since they involve physical damage.

Uneven Shearing

Cause. Poor adjustment of equipment either in the form of dull blades, worn raising or laying brushes, uneven adjustment of blades from side to side or side to center, or uneven grinding of the revolving blade to the ledger blade.

Correction and Prevention. If the cloth will permit it, a napper is used to raise additional fibers to allow an even cut. This can only be done when there is sufficient tensile strength.

Prevention requires constant observation and checking by the foreman and the operator. Any signs of unevenness must be reported to the mechanic in charge to allow an immediate check for the causes listed above.

Blades are to be tested regularly to determine whether they will cut tissue paper cleanly and whether they are in proper relation to the ledger blade and the bottom in proper relation to the rest.

In grinding, all care must be exercised to get the revolver ground evenly and to insure that the ledger blade is a good fit. This must only be done by a competent mechanic.

Choppy Shearing

Cause. In cases of velours and suedes, etc., cloths crowding the blade, or the blade making too deep a cut will result in choppiness. The cylinder speed must be correct in relation to the cloth speed to insure cutting instead of pulling of the fibers to be sheared. Slow speed may be due to a belt slippage.

Dull blades will also cause choppiness by cutting some fibers and passing others. Raising more fibers than are cut off in each run

through the machine will also cause choppy shearing.

Correction and Prevention. Proper adjustment of the depth of cut will avoid overcrowding on the first cut. The raising brush must be so adjusted that only the amount of fibers which can be cut off in one cut are raised at one time. If more are raised, they would be further raised by the second raising brush, causing the chopping appearance.

An additional run through the shear is far better than costly refinish in the form of napping. The correct ratio of cylinder speed to cloth speed is 1450 revolutions per minute against 58.6 yards per minute on the Parks & Woolson shear. Belts can be shortened very easily should there be any slippage.

Dull blades are checked as before. The most common cause for dull blades is not in the amount of shearing done but rather the amount of reshearing done on shear flock which is not removed by suction or by air jets. This is only due to carelessness by the operator.

Shear Cuts

Any unevenness in presenting the cloth to the blade will result in cuts. Poor seams, wrinkles under the blades, or knots and bunches under the cloth as it passes over the rests are some of the major causes.

The use of spreader rolls and effective brushes to remove clinging flock are corrective measures.

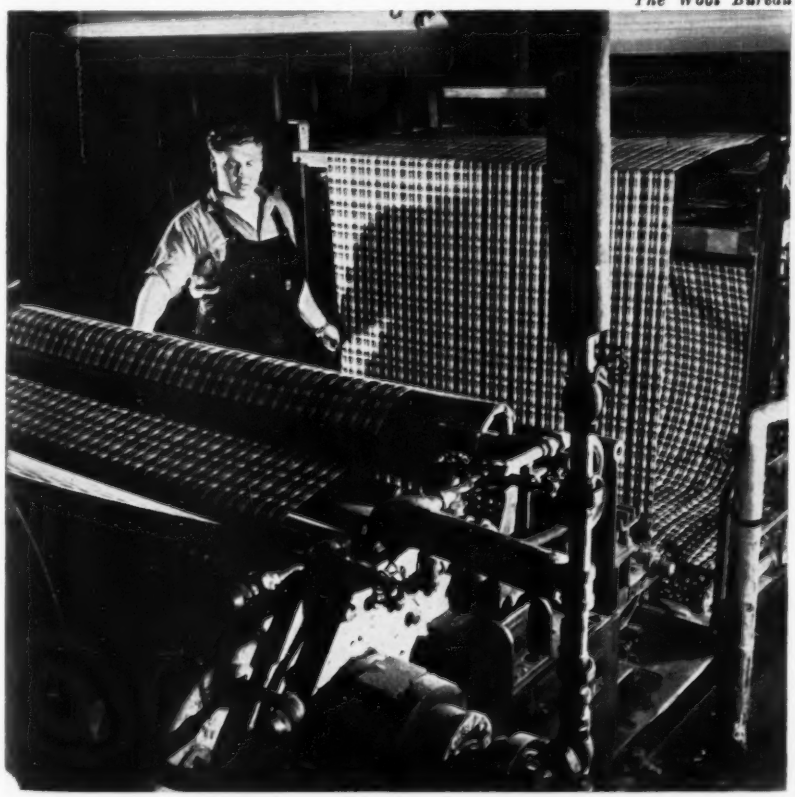
Customer allowances are the result of damaged cloth. There is no alternative.

Spots and Stains

Shearing is a major contributor to this fault. Shear blades are protected from "burning" by oiled swabs, which ride on top of the revolving blade, for lubrication. The least excess will drop on the cloth and requires hand cleaning.

The shear is a high speed machine, a considerable amount of oil and grease is necessary and, therefore, there is the constant danger of the cloth being stained.

Important points to check on the press: alignment of beds to cylinder, both side-to-side and side-to-center; foreign matter in beds or jackets; and uniform fabric moisture content. *The Wool Bureau*



PRESSING

Streaks

Any foreign matter in the beds or jackets will result in streaks in the form of more luster from the increased local pressure. Should the foreign matter be heavier, sharp cuts will be made in the cloth.

Sometimes pins from mending or from tentering chains or other metallic objects are carried by the cloth into the press. This will cause scratches or impressions in the jackets or cylinder, with the result of streaks in the cloth.

An automatic needle detector is employed, which electrically stops the press if any metallic object is present in the cloth. This device is not 100% fool proof, and extreme care must be taken to avoid such objects being in the cloth before pressing.

Folds entering the press cause press marks or cuts. Spreader rolls are employed to present a flat even cloth to the press. Very heavy seams will cause the beds to rock and the rebound is liable to cause short streaks which must either be cut off or refinished as described before.

Uneven Pressing

Since the pressure necessary for pressing is tremendous, any unevenness will show in uneven luster. Adjustments are available to align properly the beds to the cylinder, both side-to-side and side-to-center. These adjustments are easily made and single test pieces should be run as checks. These tests are preferably run on dark solid shades with more pressure than usually run in order to show any uneven luster.

Once properly aligned, a press seldom gets out of adjustment. Cylinder and beds of the press should be heated up slowly and while the beds are open and cylinder is revolving to forestall any uneven expansion of the metal. Unless this is done thoroughly, the portions which are hotter will

press more firmly when the beds are closed.

Moisture plays a large part in producing the desired luster in pressing. It is, therefore, important that this be uniform throughout the piece. This is best controlled by spraying an even amount of water on the cloth, either by a dewing machine or by a pressure spray. This moisture must be even, otherwise luster streaks will result. These can only be removed by wetting out and refinishing.

Spots and Stains

Any accumulation of oily flock or waste will be pressed into the cloth and is very difficult to remove, since it is set by the heat and pressure. To reduce this fault, both the face and back of the cloth are brushed before it enters the press.

DECATING

There are two types of decating —vacuum, and semi-decating or mantling. The imperfections caused are of similar nature, but for clarity are explained individually.

Shadiness—Vacuum

Aprons used in decating will become damp if used continuously, particularly if the vacuum is not thorough. This dampness starts on the edges of the apron and gradually works towards the center. Shadiness side-to-center and end-to-end will be the result.

Improper winding with uneven tension will cause end-to-end shadiness and, in some cases, moiré. This form of shadiness and moiré is removed either by a warm water rinse and refinish, or by redecating.

Shadiness—Semidecating

Shadiness in semidecating is also caused by damp blankets. In addition, if inferior blankets are used, it is possible for the color to bleed and stain the cloth. This bleeding can only be corrected by redyeing the pieces into some darker shade.

Tenderness

Unless great extremes in steam are used, decating seldom causes tenderness. Extensive tests made on a delicate fabric such as the worsted mohair tropical have borne out this statement.

Cross Pattern and Impression Marks

Cause. The apron used in vacuum decating is usually a sateen weave. Any curving of this apron will imprint a cross pattern in the cloth, particularly on such clear types as tropicals. This is associated with vacuum decating because of the tension and pressure under which the cloth is wound on the cylinder.

Impression marks are the more common, resulting from seams in the pieces, one end of a piece being wound up too close to the preceding piece on the roll.

Correction. The correction of these conditions is in either wetting out or warm rinsing and complete refinishing.

(To be continued next issue)

Tests resistance of blends of wool and man-made fibers to insects

■ SUSCEPTIBILITY of blends of wool and man-made fibers to attack by moths and other pests was discussed by Donald J. Ott of Geigy Chemical Corp. at the December meeting of the New York Section, American Association of Textile Chemists and Colorists.

In his talk on "Mothproofing for Blends of Wool and Man-Made Fibers," Mr. Ott said in part:

"Standard AATCC tests for the resistance of textiles to insects have been run with various blends of wool and man-made fibers. The three representative species of keratin pests (webbing clothes moth, *Tineola biselliella*; black carpet beetle, *Attagenus piceus*; and the furniture carpet beetle, *Anthrenus flavipes)* were compared in fabric weight loss tests with all of the important wool blends.

"The most extensive test series were run with untreated nylon/wool blends with the proportions of the two fibers scaled in 10% intervals (0/100, 10/90, 20/80, etc.). With all three species, the greatest damage occurred on the blends with 10 to 40% nylon and with some of these blends, the damage exceeded that obtained with 100% woolen fabric. Microscopic examination of the fibers in the digestive tract and in the excrement indicate the larvae can bite off pieces of these indigestible fibers and pass them through the intestinal tract without change.

"These nylon/wool blends were much more susceptible to feeding by the *Anthrenus* carpet beetles than to feeding by the *Attagenus* beetles and clothes moths. In fact, the damage on the fabrics with up to 90% nylon was so extensive that only the 100% nylon could be considered mothproof in these tests with *Anthrenus* carpet beetles.

"Tests with untreated and Mitin-treated blends of wool and various man-made fibers indicate that the untreated blends vary in susceptibility. In the order of increasing susceptibility to damage, they can be listed as follows: Dacron, Orlon, nylon, regenerated cellulose, and regenerated protein fibers. Other conditions being equal, the relative susceptibility to damage was determined by the strength properties of the fibers—the weaker cellulose fibers being damaged much more than the synthetic fibers such as Dacron.

"Other factors such as the presence of attractive food (sizing, food stains, etc.) and various properties of the fabric (fiber diameter, finish, etc.) also affect the susceptibility of the blends. Greatly increased feeding was obtained by baiting the test patterns with brewer's yeast to simulate food stains. Napped fabrics and loosely-woven fabrics were also much more susceptible to damage. However, all of the blends—regardless of type of fiber, food supplements, etc.—were adequately protected when treated with Mitin."

South Carolina mill men discussed

loom improvements and roll run-out

Brandt—Whitin

Marshall—Draper Corp.

Etters—Reeves Bros.

Gray—U.S.D.A.

Cunningham—Saco-Lowell

Staff report

MEMBERS of the South Carolina Division of the Southern Textile Association heard Donald Marshall of the Draper Corp. describe the Draper automatic filling magazine and other Draper loom improvements at the fall meeting of the association. More than 200 attended the meeting, which was held at Clemson, S. C.

A motion picture made by the J. P. Stevens engineering department was shown, depicting a study made at the Monaghan Plant to justify the installation of automatic filling magazines. The picture showed the conventional method of filling batteries as compared to the Draper automatic method.

Mr. Marshall said that his firm has under development a shuttleless loom which is expected to be ready for showing within a year.

THE 1957 COTTON CROP showed a decrease in the Pressley Index number, except for Texas, California, and Arizona, according to a report given by W. H. Gray of the Clemson Cotton Fiber Spinning Research Laboratory, U.S.D.A. Mr. Gray indicated that the late season crop showed a further decrease in Pressley Index number.

The yarn break factor showed a slight decrease and was lower for the late season harvest, except for Texas, California, and Arizona cottons.

Fineness was about the same as 1956 crop generally both for early and late season harvests, and slightly more mature fibers were prevalent, except in Georgia. Maturity was about the same as the 1956 crop for late season harvests.

The Fibrograph upper half mean was slightly higher than in 1956. A lower number was indicated for late season cottons, according to Mr. Gray.

LINT AND LUBRICATION are the major obstacles involved in controlling top-roll runout in the mill, according to W. C. Cunningham of Saco-Lowell Shops. Adequate sealing is required without sacrificing free motion of the rolls, Mr. Cunningham concluded.

Roll runout is noticed more today because of higher drafts, Carl Brandt of Whitin Machine Works told the group. Yarn defects are magnified by roll runout or eccentricity, and test results examined on a Seriplane showed that a variation up to 14 per cent on mid-range counts of yarn appeared to be permissible; 15.8 per cent was visible; and 17.6 per cent was seen plainly and was accompanied by a rapid drop in breaking strength on the graph.

Two pairs of rolls were checked to determine permissible tolerance with various drafts. On one-inch rolls and drafts up to 10, 0.007-inch tolerance is satisfactory; with drafts of 10-15, 0.005-inch is permissible; and with drafts of 15-25, 0.004-inch tolerance must be held.

Drafts over 25 call for not more than 0.002-inch eccentricity. On 1⅛-inch rolls, drafts up to 10 call for not more than 0.008-inch tolerance; drafts of 10-15, 0.006-inch; and 15-25, not more than 0.004-inch.

Roll handling in scouring contributes to roll difficulties, Mr. Brandt said. In many instances where the aforementioned tolerances are adhered to, subsequent handling of the rolls in scouring amounts to the controlling influence and determines whether the rolls stay within the manufacturers' tolerances. Rolls should be checked when replaced to see if they are bent or otherwise displaced out of tolerance, according to Mr. Brandt.

Bad Work Detective

Puts the finger on the roll that caused the irregular sliver

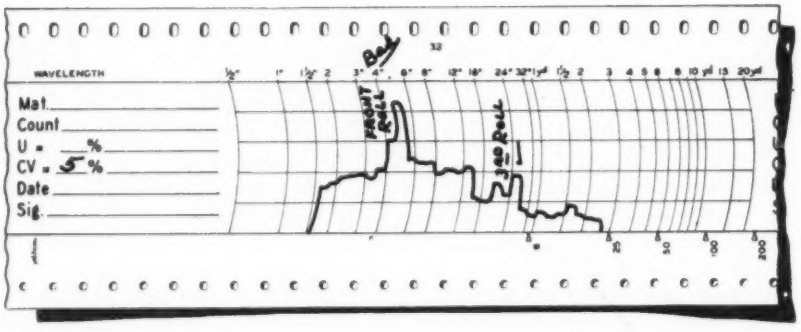
The operator adjusts the Uster Evenness Tester which is to probe every increment of diameter along the 100 yards of sliver. The findings are relayed to the Spectrograph (under table at lower right) which stores the data throughout the test interval. Once the interval is complete, the operator starts the recorder at upper right which plots the data from the Spectrograph. Periodic fluctuations in diameter are drawn as peaks, scaled to reflect severity, under a numeral giving the length of the repeat. See actual Spectrograph curve reproduced below which disclosed bad conditions existing in the first and third drawing rolls.

Staff prepared Exclusive

SINCE the tracing made by a sliver tester suggested that the 12-yd sample indicated more-than-usual unevenness, the sample (not the part already run through the tester—it is never run twice) was taken to the Spectrograph for further study.

The operator inserted the sliver into the Uster Evenness Tester and stood by as the instrument probed every increment of diameter along 100 yards of the stock. As the tester examined the diameter for variations, the Spectrograph (an accessory for the tester) made a "mental" note of the appropriate changes in diameter found by the tester.

Two and one-half minutes after the Uster tester was started, the Spectrograph recorder was switched on. The instrument traced a graph from the data stored in its memory—the curve so traced showed no repeating variation, so the original tracing was noted as showing only random variation.

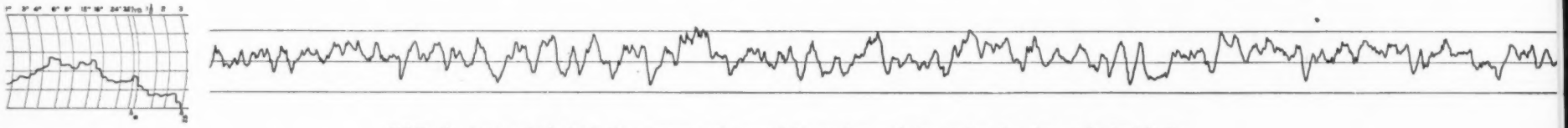


Pepperell Mfg. Co., Lindale, Ga., uses the Spectrograph to support the examinations made by other testers on 120 deliveries of drawing daily. The original tracings from the 120 deliveries are studied for patterns indicating machinery imperfections. If there is any doubt, the delivery is subjected to closer scrutiny under the "eyes" of the Spectrograph. This work is in addition to routine tests made of eight deliveries.

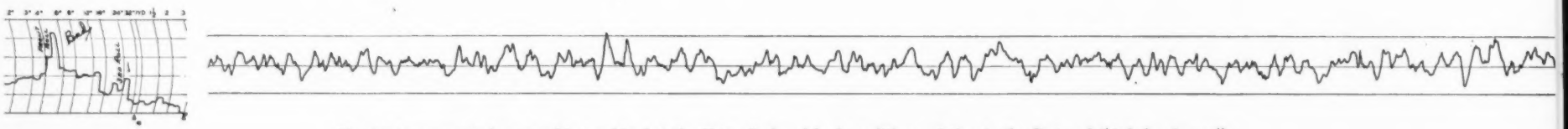
Often the Spectrograph is at odds with the original tracings. Sometimes the originals indicate repeats which are refuted by the Spectrograph, and often the latter finds repeats not indicated on the original tracings.

Part of its value lies in its ability to discriminate between random variation, repeating variations, and processes. Not only can the instrument separate variations which "support" each other on the original tracings, but it also re-

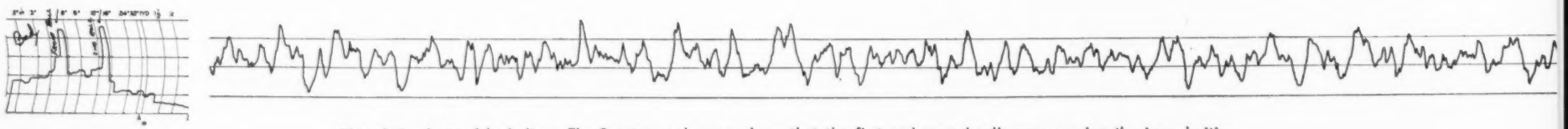
The Spectrograph found trouble lurking in some of the sliver uniformity tracings. In each case the chart on the left below is the tracing made by the Spectrograph (see larger tracing on page 76) as it examined a fresh sample of the sliver used by the sliver tester in making the longer tracings to the right. The sliver tester charted the diameter along 12 yards of sliver; the Spectrograph examined 100 yards, "remembered" the frequency and severity of the irregularities found, and charted them after the sliver was examined. The notes on the Uster charts are the jottings made by the technician who examined the original tracings, ordered the Uster Spectrograph tests to be made, and issued the final diagnoses recorded under the tracings. Charts were made at Pepperell Manufacturing Co.



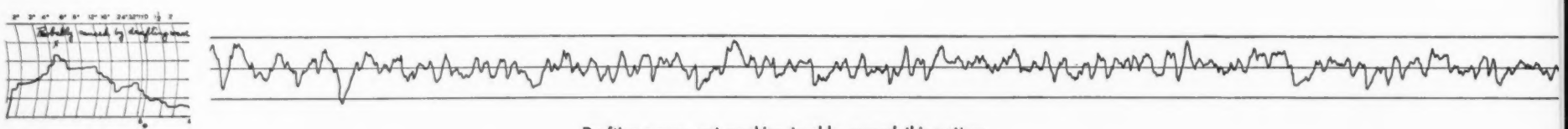
While the tracing looks bad, the unevenness is caused by random variation rather than by mechanical faults.



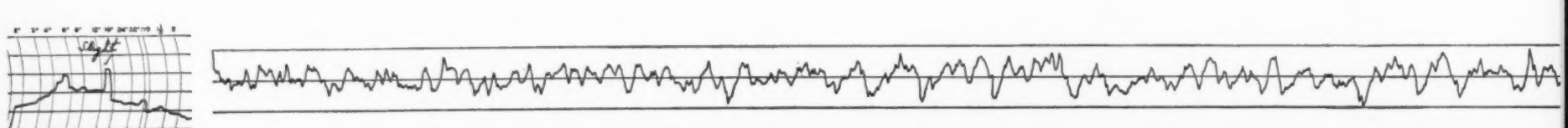
The tracing suggested no possible trouble, but the Uster disclosed bad conditions existing in the first and third drawing rolls.



This obviously is of bad sliver. The Spectrograph curve shows that the first and second rolls were causing the irregularities.



Drafting waves, not machine trouble, caused this pattern.



The third drawing roll caused a slight irregularity.

mains unimpressed by any variation inserted at processes preceding the one under study. Thus it is that every drawing roll on a particular frame could be eccentric, and the instrument would spot each roll's part in the variation without being influenced by what the cards or the pickers did to the sliver. By the same token the finished yarn can be examined for variations inserted only by the spinning frame.

Since there always is a possibility that the original tracings will not disclose trouble, or will sound a false alarm, the Spectrograph is used primarily for double checking until a hint of "bad running" appears in the plant. Then the instrument is turned on until the conditions return to normal.

The analyses turned in by the Spectrograph are most useful in finding machinery faults such as roll eccentricity, binding gears, loose gears (this condition is still easier to find at the drawing frame than at the tester), and drafting waves. The latter are caused in part by roll settings and staple length differentials and show up on the graph as minor peaks.

The graph paper used by the instrument is so marked that the peaks showing repeating variations fall on the graph under the numeral reflecting the distance in inches between the variations. (See chart reproduced on page 76.) With this figure available (there may be more than one peak on each graph) it is a simple matter to determine which drafting roll caused the peak. If the graph indicates a repeat every five inches, and the front drawing roll has a circumference of five inches, then the front roll is the culprit.

If the repeat equals the circumference of the second roll times the draft between it and the first roll, then the second roll is guilty. The draft between any given roll and the front roll is multiplied by the circumference of the given roll to find the figure to be used in spotting the offending roll on the graph.

To see how mechanical defects are pinpointed by the Spectrograph, study the five typical illustrations on page 77.

What is good roving, Mr. Wool Carder?

■ THE SPINNER asks for a large, well-wound spool with the correct amount of rub or condensing for a strong roving. Good roving spools will reduce waste and reduce end breakage.

Wound spools should strive for large diameter and large cheeses. A large size spool results in a greater amount of roving per spool, offering less creeling of spools and definitely increasing frame efficiency by offering longer running time without creeling, on both the spinning frame and card.

"Cheeses" should be hard enough so that the roving does not "slough off" the side. They should be wide enough to prevent unnecessarily wide crevices between them as another means of increasing the amount of roving per spool. A crevice too wide allows roving to "slough off" the side. A crevice too narrow causes roving ends to overlap, both resulting in possible additional broken ends in spinning.

The amount of condensing must be determined by the results required. The type of goods being produced determines the hardness of the yarn—i.e. a hard yarn for carpets; a soft yarn for blankets. The stock used affects the condensing required—i.e. long fiber virgin wool requires a minimum; reclaimed wool with worn, smooth fibers requires a maximum condensing. Quality versus production also, a management decision, determines the amount of condensing allowable.

Roving can be controlled on the card condenser by properly adjusting draft or variation in speeds between (a) tapes and first bank of aprons, (b) first and second banks of aprons, (c) second bank of aprons and spool drums.

It is controlled by (a) type of apron used, (b) length of rub or stroke, (c) speed of rub or eccentrics (d) pressure between aprons on drive rolls and compression rolls.

Roving from all four banks of aprons must be identical. This often means a slight difference in speeds and pressure between aprons due to possible differences in their ages, condition, and rubbing efficiency.

Build of the spool determines how easily and efficiently the spinning frame can handle and spin the roving.

Build a large spool. As the diameter increases, the circumference increases 3-1/7 times as fast, so that the last inch of diameter would contain much more roving than the first. A large spool barrel, 3" diameter, means less slippage and less waste stock to be cut off. These items contribute to less waste and reduce creeling and doffing time.

Proper crevice width and build of the spool can be controlled by adjusting the position of finger guides, amount of traverse of these finger guides or spools, and the speed of the traverse motion.

Uniform build of the spool (cheese for cheese) depends also on the coordination of specifications for cards and spinning frames in this respect. The gauge size and number of spindles per frame affects the number of ends per spool and the length of spool. This influences the width of card required to minimize "side draw" in winding the spool. When the length of the spools (either four or eight to a card) is longer or shorter than the length of the aprons, the resulting "side draw" combined with traverse action may cause uneven tension and faulty roving on spools.

Uniform and proper winding tension between the spool and apron can be controlled by adjusting spool drum speeds collectively or individually.

Careful handling of spools, with handling kept to a minimum, will preserve the good condition of the spools. For example, the full spool should be lifted from the card directly to a rack truck and then from the truck directly to the spinning frame. Some mills use an overhead rail system with racks which transfer the spools directly from the card frame.

—Davis & Furber News

What is YOUR spinning overhaul cycle?

Compare your answer with practices reported by Alabama operating executives who also discussed use of nylon tapes and cleaning schedules

This is the concluding installment of the report on the fall meeting of the Alabama Textile Operating Executives, the previous installment of which was carried in the December, 1957, issue of this magazine, p. 114.—The Editors.

Staff report

GIVE *your procedure for overhauling spinning.*

(a) Give cycle of overhauling frames.

(b) Are cots re-buffed at same interval as frames overhauling, or more often?

(c) Do you scrub steel rolls when overhauling?

(d) What is the best method of breaking in new rings?

(e) What experience have you had with special finishes on spinning rings? How did it affect ring life? Did you alter the spindle speed?

The majority of the plants overhaul spinning frames on a yearly basis. Some overhaul every two years, some every six months, some every eight months, and one reports overhauling every 7200 hours.

Only two plants buff rolls at the same time the frames are overhauled. Most of the mills prefer to buff more often, and this practice may take the form of buffing the front rolls twice as often as the back rolls.

The plants are almost evenly divided in practices of cleaning steel rolls at the time the frames are overhauled, with the number of plants preferring to clean rolls more often being slightly in the majority.

Some of the plants adhere to elaborate check lists when overhauling. *Mill J* has two cycles of overhauling each year, and lists the following duties for the first cycle:

(1) Clean steel rolls
(2) Replace worn aprons
(3) Buff top rolls
(4) Set cap bars

On the second cycle:

(1) Clean steel rolls
(2) Replace worn aprons
(3) Buff top rolls
(4) Set cap bars, replace worn cap bars
(5) Shellac creel, make any needed repairs
(6) Line and level frame
(7) Replace worn lifting rod bushing
(8) Set and replace traveler cleaners
(9) Plumb spindles
(10) Overhaul head of frames, replacing all worn parts
(11) Clean tank in oiling system
(12) Check all connections on oiling system

Seven of the plants mention that rings are broken in with lighter travelers than are to run after the breaking-in cycle is complete. Two of those plants also start with a front roll speed lower than is to be run once the rings are broken in. Here again there are as many systems as there are plants.

The procedure given by *Mill H*, though not necessarily representative, is indicative of the efforts expanded by some to get the effects desired. This plant applies a thin paste of olive oil and sulfur to the rings before starting the frame. A traveler two numbers lighter than is to be used ultimately is selected for the breaking-in. The front roll speed is reduced by 10%, and the following traveler changes made during the cycle:

Traveler change	Running time in minutes
First	75
Second	120
Third	180

(Continued next page)

General Chairman Alford

Quenelle—Spinning

COMPARATIVE SPINNING JOB LOADS

Mill	Yarn Count	Front Roll Speed (rpm)*	Twist (Turns per inch)	Ring Size (")	Traveler Speed (feet per minute)	Ends Down per M Spindle Hours	Hank Roving	Roving Package Size (")	Roving Package Weight	Spindles Assigned per Spinner
A	18	165	14.14	2¼	4330	30	1.40	10 x 5	28 oz	1890
B	14 (filling)	205	13.96	1⅝	3910	35	0.60	12 x 6½	4.00 lb	2148
	27 (filling)	148	19.37	1⅝	3910	35	0.90	12 x 6½	3.90 lb	2904
	21 (warp)	138	20.25	2½	5825	35	0.60	12 x 6½	4.00 lb	3295
	31 (warp)	112	24.19	2¼	5242	35	0.90	12 x 6½	3.90 lb	3754
C	17	151	19.78	2½	6143	35	0.90	10 x 5	1.60 lb	1920
D	30	108	22.46	2¼	4901 to 5301	22 (avg.)			1.47 lb	2772
E	10	165	14.23	2½	4828	75	0.60	12 x 6	60 oz	1287
	15	146	15.49	2½	4650	60	0.72	12 x 6½	57 oz	1779
	20	125	21.24	2½	5459	60	1.00	12 x 6½	53 oz	1866
	27	105	24.68	2½	5328	60	1.00	12 x 6½	53 oz	1976
F	31.5 (warp)	135	24.60	1⅞	5153	25	0.90	12 x 6½	56 oz	3432
	41 (filling)	120	25.30	1⅞	3600	45	2.00	10 x 5	26 oz	2464
G	14	154	17.77	2 5/16	5530	70 to 80	0.80	11 x 5½	2.13 lb	960
H	13.5	162	16.57	2½	5519	45	0.70	12 x 6½	53 oz	4158
I	8.75	180	13.30	2¾	5579	45	0.65	11 x 5½	2 lb	1120
J	14.5	149	18.10	2⅛	4780	30	1.15	10 x 5	1.65 lb	1710
K	20	134	22.50	2¼	5495	38.3	0.90	10 x 5	1.7 lb	3200
L	34.5 (warp)	121	25.90	1¾ & 2	5236 & 4600	20 to 30	1.50	10 x 5	1.90 lb	3168
							1.25	10 x 5	1.90 lb	
							1.50	9 x 4½	1.33 lb	
M	13.75	150	17.50	2½	5720	40	1.00	10 x 5	1.70 lb	2394
N	8.0	194	12.74	3	6073	30	0.92	12 x 6	48 oz	1368
Mix G.S.	10.5	183	14.66	2½	5519	30	0.92	12 x 6	48 oz	2052
	12.5 to 13.5	167	16.13	2½	5519	35	0.92	12 x 6	48 oz	2280
	15.0 to 17.0	145	18.62	2½	5519	35	1.50	10 x 5	28.79 oz	2280
Mix A.G.	8.0	189	14.24	2½	5519	35	0.92	12 x 6	48 oz	13.68
	10.0 to 15.0	167	16.13	2½	5519	35	0.92	12 x 6	48 oz	1710
	15.0 to 23.0	153	18.62	2¼	5240	30	1.50	10 x 5	28.79 oz	2736
O	7.00	187	11.25	3	5188	41	0.60	12 x 6	50 oz	1296

*Front roll diameter, 1"

(Continued from page 79)

Fourth	240
Fifth	360
Sixth	480
Seventh	720
Eighth	960
Ninth	960
Tenth	1440
Eleventh	On schedule of 96 hours

Mill C reports that on some 2½" rings running with a special finish have held up very well so far. The plant did not alter the spindle speed when adopting the rings.

Please give your experience with nylon tape

a. Life of tape

b. Compare slippage of cotton and nylon tape

c. Power consumption

d. Saving or loss from their use

Three of the plants have amassed enough experience each to feel qualified to answer. *Mill C* started using the tape only a short time ago, and cannot evaluate tape life as yet. Tests indicate less variation in speed among those spindles driven by nylon tape.

Mill E reports that preliminary tests indicate the nylon tapes have approximately three times the life of cotton tapes. There is less slippage when the tapes are new, but the plant has no information concerning the slippage of old nylon tapes compared with cotton tape slippage.

Mill J has four frames running on nylon tapes, and over the 21 months the tapes have been running only two have failed because of bad bonding. Whole jobs are being changed to the nylon. Spindle-speed checks fail to disclose any difference in slippage between the nylon and cotton tapes. The plant calculates a saving in power of $2.00 per frame per year, and reports further savings in labor, tape cost, and in increased production (effected by fewer idle spindles).

The plants were asked to discuss spinning jobs, following a given outline, and the resulting replies are tabulated at left for ease of comparison. The column headings are self-explanatory.

John McCosh, Roy Townsend, and J. D. Moore represented Muscogee Mfg. Co., Columbus, Ga. To the right are cotton technologists

Herbert Hutchens, C. B. Landstreet, and Jack Simpson, all from the USDA. J. Murphy Cook, H. M. McFadden & Bros., Memphis, Tenn.

Cleaning Practices. Keeping the spinning frames free of transient fly is a ceaseless task, and each plant, to meet this problem has evolved its own cleaning system. Consequently there is no standard cleaning practice.

The cleaning duties assigned to the spinners in *Mill A* (running 18s yarn, and equipped with suction cleaning) are listed:

(1) Wipe back sides, front stands, suction cleaner flutes, flute hangers, and weight wires and levers once each shift (on the doff) on sides assigned to the spinner's shift.

(2) Keep front sides clean at all times

(3) Keep roving tails off bobbin hangers at all times

(4) Wipe base rails and spindle rails as follows: first shift, at 8:00 a.m. and 12:00 a.m.; second shift, 4:00 p.m. and 8:00 p.m.; third shift, 12:00 p.m. and 4:00 a.m.

(5) Clean the following on one side each day: (a) bottom and top rolls and around aprons and cradles; (b) tape tighteners, weights, green boards and sampsons; (c) front stands with stand hook; (d) spindle rails and base rails including cleaning; behind them; (e) back stands and roving trumpet slides; and (f) roller bars and gear covers;

(6) Tuesday and Friday (on sides assigned to spinner's shift) clean ring rails and separators with brush.

(7) On sides assigned to the spinner's shift: (a) clean under one side of spindles with roller picker while the frame is stopped during the week before payday; and (b) clean all top revolving clearers during the week after payday.

There are no cleaning operations not assigned to the spinners.

Mill D, running 30s yarn and not equipped with suction cleaning, has spinners run out guides every 30 minutes.

The remaining spinning cleaning is done by personnel other than spinners, and amounts to cleaning under the guides every two weeks, brushing the spindle rails every four hours, wiping the backs every four hours, cleaning creel rods, ring rails and separators each 60 hours, picking rolls every 24 hours, and cleaning revolving clearers every 60 hours.

New AATCC dry cleaning test method

■ A MORE realistic method of evaluating the probable behavior of colored textiles in commercial drycleaning has been adopted by the Technical Committee on Research of the American Association of Textile Chemists and Colorists.

The new method will be identified as Tentative Test Method #85-1957. It replaces test #25-1952, Colorfastness to Drycleaning.

The Committee has also approved a new test for evaluating the durability of applied designs and finishes to drycleaning. Designated Tentative Test Method #86-1957, it is the first such test to be developed by the Association for testing the retentive qualities of applied designs and special finishes. It is especially useful in evaluating flock and metallic prints, where the effect of mechanical action in cleaning with drycleaning solvents must be simulated.

Culminating more than five years of research and development work carried on by the Committee on Drycleaning Test Methods, with the cooperation of AATCC Research Laboratories, the new colorfastness test utilizes the recently adopted International Geometric Gray Scale for grading color loss or fading. Staining is not evaluated in this test as was previously required.

According to the National Institute of Drycleaning, the problem of staining is largely controlled in commercial practice and is too small a factor to warrant consideration. In contrast, color fading due to the solubility of dyes in solvent is becoming an increasingly greater problem, the Institute pointed out.

The American Standards Association is said to have requested that the new tests be submitted for use in the revised L22 standards to cover all fibers. In this connection the National Institute of Drycleaning has advised that it will recommend a minimum colorfastness of Class 4 on the Gray Scale based on its observations during committee investigations.

As the tests are based on correlations made with actual drycleanings in commercial equipment, the Institute found that the fabrics having a fastness rating of Class 4 or better were in satisfactory condition after three cycles of cleaning.

For retention of applied designs and finishes, the Institute recommends a minimum of A4 for appearance and B4 for "hand." Performance evaluations are made by existing methods of evaluation.

Copies of the tests are available from AATCC, Box 28, Lowell, Mass.

Super Tufter machine at Petmar Industries in Yorkshire is used to make 50 per cent wool tufted carpeting. Note that operative works from sliding seat in front of the machine.

Tufteds in England

Development of England's tufted textile industry has followed the rapid growth pattern seen earlier in this country; many firms are using American machinery

by P. Abbenheim
Exclusive

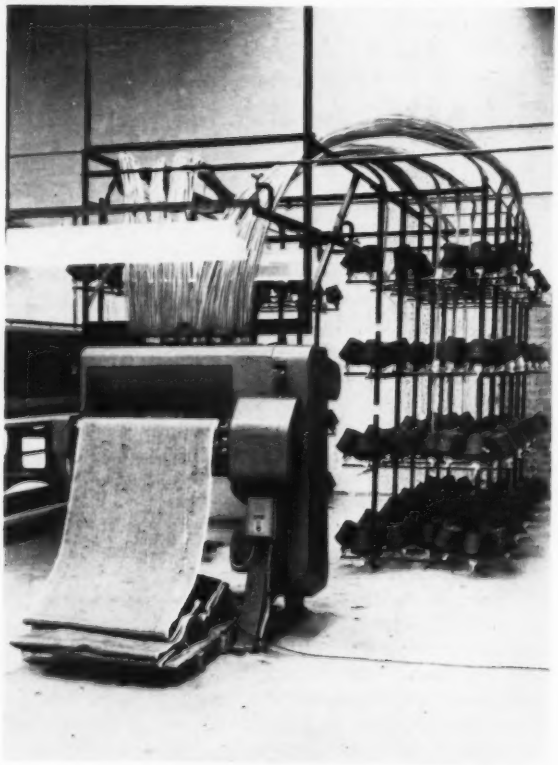
THE BRITISH tufted carpet industry is only about three years old. The first carpet, probably, to reach the British market was a loop-pile type made on a Cobble Brothers machine imported from Chattanooga by the firm of Hardura Ltd., who market it as Harduraloop. The pile is a blend of either viscose rayon staple and Ardil* protein fiber, or viscose and Fibrolane protein fiber.

The carpet was sold in the domestic trade for quite a time before any competition was encountered, and it is interesting to note that this first commercial production was made with a polyvinyl chloride backing. Hardura promote the carpeting on the grounds that it is virtually nonflammable and is, therefore, ideal for use in such public places as motion picture theaters, planes, etc., where fire hazards can be very serious.

Harduraloop is claimed to be

*Production of Ardil was recently discontinued.—Editors

Sample machine at Cobble Brothers' Blackburn, Lancs., plant is also used for training.



self-extinguishing when brought into contact with a flame. It scorches, but as soon as the flame source is removed, it stops burning, leaving merely a scorch mark that can easily be removed. The PVC, of course, locks in the loop very securely so that a protruding nail from a shoe, for example, does not dislodge a loop—the yarn breaks before the bond.

Although Cobble Brothers provided the machine for Britain's first tufted carpets, it is interesting to note that Super Tufter appears to have sold the most machines in Britain, excluding, of course, sales of the new British high speed tufting machines. But it was Cobble who first decided to set up a British subsidiary to serve the European market. They took over a disused wallpaper factory in the heart of Britain's industrial north, at Blackburn, where there were already available trained craftsmen to manufacture the tufters.

In the new factory, Cobble has started to manufacture such small components for tufters as the loopers, cutters, etc., and by the time this is published the company's first tufter will have been completed and shipped to the first customer of the new firm.

As a basis from which to work, the Blackburn firm has been supplied with a range of machines from the American parent company, including 30-, 61-, 120-, 180-, and 216-inch machines. These, of course, incorporate all the latest features of the American products.

It is now, however, intended to build an identical range of machines in Britain. The reason for this is the width of jute backing cloths available to potential users. Thus it has been decided to make a range of machines in 30-, 61-, 120-, 162-, and 202-inch widths. This enables British tufters to utilize fully the width of their machines.

ONE INTERESTING feature of the new Cobble machines is the automatic traverse of the backing cloth feed. With this unit it is possible to insure that at least one selvage of the carpet will be straight. A feeler rests against the backing cloth edge and when the cloth moves out of line in one direction or another a small servomotor is activated so that the backing cloth roll and feed are traversed the necessary amount to keep the selvage at the desired position beneath the needles.

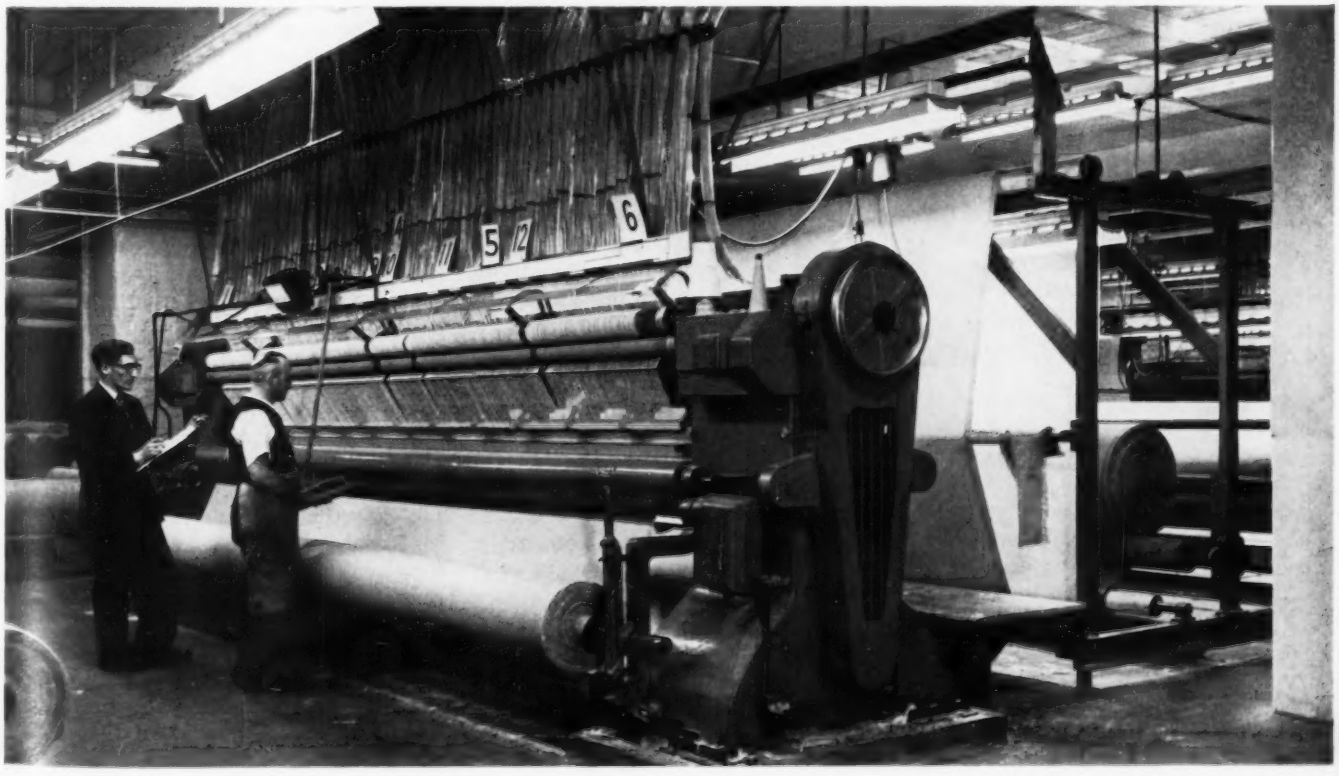
On the British machine, the roll of backing is placed on a set of rollers and fed into the machine. This carrier is mounted on wheels so that the cloth may be pushed or pulled into line.

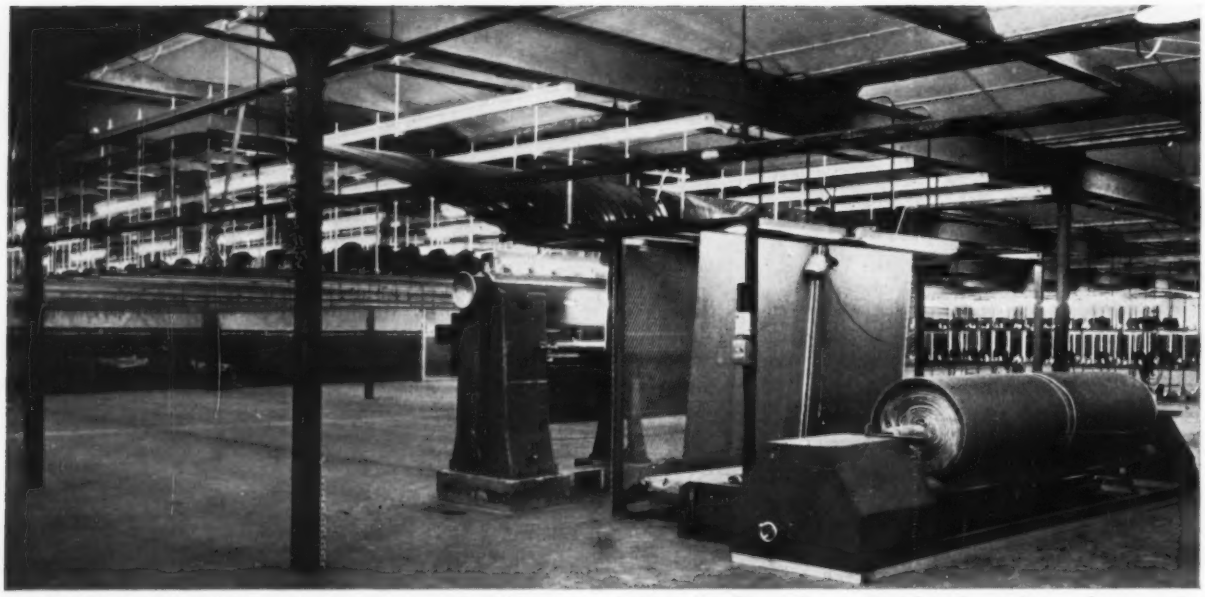
One firm in Lancashire has decided that this method of working is not really satisfactory and has evolved its own method of feed. The cloth is dropped onto the backing carrier. Then, to ensure that it maintains its precise position, four collars—held by keyed screws — are slid into position against each end of the cloth. Thus the cloth, of which one selvage is virtually straight, is held quite firmly by two collars at each side.

The collars are about one inch deep and are mounted around each of the two free rollers on which the cloth rests. This is a simple expedient, but as the firm using it was one of the first to make a cut-pile tufted carpet in Europe, it may be accepted that it is a highly satisfactory arrangement.

Latest talk in Britain is that

Super Tufter 208-inch cut pile machine at Kosset Carpets' new Yorkshire plant has broken-end identification system—note key numbers at end of nylon tubes coming from two-level creel room above. Intercom speaker can be seen above the operative's head.





American know-how is being utilized by a new Lancashire firm, Rivington Carpets, which is associated with Cabin Crafts, Inc., of Dalton, Ga. The mill uses English-made machinery, however; the first in operation is shown in photo above making two 54-in. widths.

Ten-Tex Corp. has decided to enter into competition with existing tufting machine builders, although it is not known whether any of this firm's machines are at present installed in Europe. Of course, the possibilities for tufting extend far beyond carpets and it is known that hardly anyone has yet seriously considered the possibility of making furnishing fabrics on these machines and doubtless this is a potentiality not to be overlooked, any more than is the growing candlewick trade.

Super Tufter has not decided to set up a European organization for building its machines, although it is generally accepted by British tufters that this firm's patterning system is just about the best available at the present time. Also, they are the American firm with the most carpet tufting machines installed.

THE BIG FIVE British carpet manufacturers — Brintons, Carpet Manufacturing Co., John Crossley Carpet Trade Holdings, James Templeton, and T. Bond Worth — have combined to form a tufted carpet manufacturing company which operates under the name Kosset Carpets Ltd. Each firm has chipped in 200,000 pounds to provide this new venture with a potential capital of about $2,800,000. The new company has worked very closely with Bigelow-Sanford Carpet Co., obtaining from the American firm the benefit of its experience in the manufacture of tufted carpets.

Kosset is making two types of tufted carpets, "Service" and "Super," both of which have an all-viscose pile. The Service quality is a shallow, loop-pile structure, while the Super is a deep, cut-pile type, the pile being about one-half inch deep. The firm has only just started selling in the domestic trade, and it is the only tufted carpet firm to have a full scale merchandising scheme to promote its carpets. It has proved, however, that the promotion on a large scale of Kosset tufted carpeting has already done much to acquaint the British public with the virtues of the tufted carpet and already sales of other companies have received an indirect boost as a result of Kosset promotion.

Kosset has taken over an old biscuit factory in Yorkshire, and in it they have installed two Super Tufter machines, one for cut-pile and the other for loop, both being 208-in. machines.

A novel method of manufacture has been adopted in this plant. Production is concentrated in a high building. Yarn is brought in to the top floor and is taken down as needed by means of small service lifts to the two-level creel floor. The creels are arranged on two levels and on either side of the tufters on the ground floor below.

The idea behind such extensive creel space is to permit the use of two ends of singles yarn per needle should it prove possible to work in this manner, twisting charges thus being eliminated. So far a two-ply yarn—about 2/2s cotton count—is used. The yarn is taken from the creel through extruded nylon tubes, down through the floor to the tufters beneath.

When an end breaks, an intercom system is used to signal from the tufters to the creel tenders above, an intricate but quite efficient coding system being used to identify the broken end.

Kosset's is the only British tufting plant which does piece-dyeing of the carpets. Two machines have been installed. These take 100 yards of the Super quality cut-pile carpet or 250 yards of the Service weight. Results so far obtained have been excellent. The weight of the carpeting is about 48 oz/sq yd for Super and about 28 oz/sq yd for Service. Thus the weight of a wide piece of wet carpet when removed from the winch is somewhere in the region of 5 tons.

American experience in servicing the tufted trade has also been utilized by Kosset, who have installed drying and latexing equip-

ment by Proctor and Schwartz. The Proctor and Schwartz equipment is arranged as a double line in a separate shed at Kosset. The wet carpet is fed through the dryer, taken across from the delivery end and entered at the feed end of the latexer, emerging almost at the same point as it began.

From latexing it is taken into the brushing cropping machine—Super weight only—and finally selvages are trimmed away and the broadloom carpets cut to the required widths and lengths for the customer.

Behind the Kosset plan is a good stock system that enables almost any length of any width of any color to be supplied to the trade at once. At present nine colors of Super are made and six of Service.

AMERICAN KNOW-HOW is being utilized by the recently formed Rivington Carpets, in Lancashire, which has a tie-in with Cabin Crafts, Inc. This firm is making a good quality cut-pile carpet of singles yarn, 100% viscose rayon staple. The firm is making a color-tufted carpet which, after latexing, is ready for cutting.

Rivington will be following the example of Cabin Crafts in supplying made-to-fit carpets from sketches supplied by customers. The carpets will be cut and arranged to fit any shape or size of room. Production is not yet fully under way, but when the firm reaches commercial production it is hoped that this added service will be an added appeal to what will undoubtedly be a very competitive market and one in which the fatalities might well rapidly increase.

Although Rivington is a partly American-owned concern, it is using British-built tufting machines.

A novel feature of the plant is the creel design. The mill is an old textile plant which has been converted to tufted carpet manufacture, and the creels have been suspended from the ceiling so that they may be tended from below by operatives moving beneath with cones of yarn.

The suspended creel is an idea new to the trade, as are so many developments evident in British tufted carpet factories. [But not new in the U.S.A.—see TEXTILE INDUSTRIES for June, 1956, p. 142—Eds.]

In a trade as young as this there is plenty of room for innovation and it seems that each and every firm enters the business with completely new ideas. It will take some considerable time before all these ideas have been assimilated and anything approaching a standard procedure adopted.

ANOTHER FIRM, working with only one American machine—again a Super Tufter—is Petmar Industries in Yorkshire. Petmar is making a fairly shallow cut-pile carpet called "De-Luxe Velmar," but it is probably one of the finest at present available in England, having a fiber composition in the pile of about 50% wool, 45% rayon staple, and 5% nylon staple, but precise fiber content has not been released. A cheaper quality, known as "Super Velmar," is made with a pile blend of Fibro rayon staple, Fibrolane protein staple, and nylon staple. Just how much extra the small nylon content gives to the blend, other than the magic word itself, is not yet fully known.

Petmar is a very progressive young firm which previously was concerned only with the manufacture of needleloom floor coverings. This remains an integral item of their range, but they realize that the tufted carpet trade might well steal a large proportion of the business in this other type of floor-covering, and they intend to maintain their sales by marketing good quality tufted carpets through essentially the same trade outlets, supplementing rather than substituting products.

Finally, a word about machine efficiencies. The writer has visited many British plants and so far he has only heard talk of efficiencies of 30-40%, with one very significant exception.

Using a narrow machine for making 54-in. all viscose cut-pile carpets, one firm is obtaining an output of about 60%, which, is, needless to say, a very high efficiency. Recently another machine has been installed at the plant. It is wider and is used for 108-in. carpeting. This machine is already running at 50-55% efficiency.

Both machines are British, but perhaps the high efficiency levels are attributable firstly to exceptionally good quality yarn, and secondly to the skill of the plant manager, who has evolved special machine settings of his own and who has, incidentally, insisted on incorporating many important, though often small, modifications of his own in the machines.

He has, for example built in small inspection panels in the top casting, so that he can make sure that all points along the machine are being properly lubricated by the constant pressure lubrication system, while on the gearing in the headstock a special lubrication point has been added so that a bearing that previously tended to run dry and bind no longer does so. In the event of a fault in the gearing, only one wheel breaks, this being a specially weakened one at the end of the shaft. Thus replacement and servicing is kept to a minimum and time lost reduced to a very low level.

IT WILL be seen from this brief report that British firms are expanding rapidly. Many are using American machines, including the famous post-war textile millionaire, Cyril Lord, who boldly claims that he will make carpets from cotton and synthetics, as hard wearing as wool at a quarter of the price!

There is a long way to go, but development is rapid, and by the time this appears in print there should be about fifteen firms in Britain making tufted carpets. How many of these will survive the intense competition that will ensue remains to be seen, but undoubtedly the next few years will be as fascinating in the British tufting trade as the past ten have been in the American trade.

For your 1957 index of TI articles, turn to page 199

Alston—Maintenance

Wynn—Slashing

White—Weaving

How they clean

Also discussed were:
Type 4 twills
Plastic or molded shuttles
Selvages
Dobby head maintenance
Control of size viscosity
Pneumatic press rolls
Leases-strike or pick?
Slasher stretch control
Pickup variation

Preceding reports on the Georgia Textile Operating Executives meeting were carried in the November 1957 issue of this magazine, p. 149, and in the December 1957 issue, p. 94. This discussion begins with loom cleaning.—The Editors.

Staff report

IN CLEANING your looms:

(a) How often do you blow them off?

(b) Do you have special cleaners for reed caps, lay ends, and arches, or does your regular blow off man clean these as he blows off looms?

(c) Who cleans battery heads and how often; and who cleans loose ends from Stafford thread cutters and how often?

(d) State type of cloth woven

For the replies from most of the mills, see Table 1.

Mill K-1 cleans those looms with warps running three weeks or longer once each warp-out. Looms with warps running less than three weeks are blown once each two warp-outs. The drop wires are blown once each 24 hours.

Harness cleaners are used for servicing reed caps, lay ends, and arches. These are also blown off by regular blow off man on his schedule. The battery filler cleans the battery heads once per week; and the fixer cleans the Stafford thread cutter every 24 hours. The mill is running synthetic blends.

Mill K-2 blows off the tops and ends of the looms each 24 hours, and blows off the entire loom thoroughly at the warp-out. Arches are cleaned by the regular cleaner; the harness cleaner cleans reed caps, and lay end plates weekly; and the blow-off man cleans battery heads at warp-out. Additional cleaning is done as needed either by the battery filler or by the weaver if he is to fill his own batteries. The loom fixer cleans loose threads from the Stafford thread cutter every eight hours. The cloth types produced include wide sheeting, light-weight sheetings, print cloth, and various industrial sheetings.

At *Mill P* the looms running on 80-square are blown off three times per week. Those on lighter goods are blown off weekly. The regular blow off man blows off the reed caps, lay ends, and arches. The batteries are cleaned of thread waste as required. Cloth styles range from light gauze to 80-square.

In weaving Type 4 twills:

(a) What is your allowed yards per mispick?

(b) Do you have side fork or center fork looms?

(c) What per cent relative humidity do you run on Type 4 twills; also what per cent relative humidity do you try to hold over weekend shutdown?*

(d) Have you had any trouble with warp streaks caused by har-

*Type 4 twill contains singles combed yarn in both warp and filling, and weighs 7.5 oz per square yard.

looms in Georgia mills

TABLE 1

Schedule of Loom Cleaning Duties and Frequencies

Mill	Blow off	Reed caps, arches, and lay ends		Battery heads		Stafford cutter		Cloth produced
	Frequency	Cleaner	Frequency	Cleaner	Frequency	Cleaner	Frequency	
A	24 hours	B.O.M.	—	B.F.	W.O.	L.F.	8 hours	
B	W.O.	W.	8 hours	W.	2 days	W.	As necessary	Osnaburgs, ducks, sheetings
C	24 hours (drop wires and fronts)	W. (reed caps) H.C. (lay ends and arches)	Twice weekly Weekly	B.F.	Weekly	W.	8 hours	Drapery, upholstery, headlinings, satins, broken twills, and sheetings
D	8 hours	W.	8 hours	W. (fill own batteries)	Daily	W.	—	Chafer fabrics
E	8 hours	B.O.M.	8 hours	B.F.	8 hours	W.	8 hours	Osnaburgs
F	W.O.	B.O.M.	W. O.	B.F.	As needed	(No problem)		Hose and belt ducks, and asbestos
I	24 hours	W. (harness and reed caps) B.O.M. (lay ends and arches)	— 24 hours	L.C.	W. O.	W.	8 hours	Ticking
J	24 hours	Sweeper blows off Quill stripper wipes reed caps	— —	W.O.	—	W.O.	—	Toweling
L	4 hours	R.C.	—	B.F.	4 hours	Q.M.	4 hours	Chafer and light ducks
N	8 hours	R.C.	8 hours	B.F. & C.O.	W.O.	W. & B.F.	As needed	Sateens and Type 4 twills
O	W.O. (24 hours on Jacquards)	R.C.	—	B.F.	—	W. & Q.M.	—	Fancy upholstery and drapery
Q	8 hours	R.C.	—	R.C.	8 hours	R.C.	8 hours	Denims
S	24 hours (also W.O.)	B.O.M. (Arches and lay ends) S.H. (reed caps)	— 24 hours	B.O.M.	W.O.	L.F.	8 hours	Drills, twills, sheetings, and gabardines
T	24	S.C.	—	—	W.O.	Q.M.	When taking up quills	Drills, twills, and sateens
U	24	B.O.M.	—	R.C.	W.O.	L.F.	8 hours	Prints, tickings, and sheetings

Legend: B.F.—battery filler; B.O.M.—blow off man; L.C.—loom cleaner; L.F.—loom fixer; Q.M.—quill man; R.C.—regular cleaner; S.C.—special cleaner; S.H.—smash hand; W.—Weaver; W.O.—warp out

ness on grey twills made from dyed yarns? If so, what did you do to eliminate them?

The answers from four of the plants are tabulated in the space below:

Mill	Yards per Mispick	Type Fork	Relative Humidity
G	10*	Center	85%
N	100	Center	85%
S	25	Side	88%
T	44	Both	86%

*The plant reported that 10 major defects per 100 yards are permitted.

Mills G and *N* exercise no weekend control over humidity. However, *Mill N* raises the humidity to 85% (relative) before starting the plant after a shutdown.

Mill T maintains 65% relative humidity over the weekend, while *Mill S* maintains weekend values from 76% to 80%.

Only *Mill T* reported that warp streaks showed up in the dyed cloth, and feels that bad reeds, and heddles not free to slide on the heddle bars, chafed the yarn to that condition.

If you use endless check straps:

(a) What has been your experience with them compared with the conventional check strap for X-2 looms?

(b) Do you justify them through longer life or through higher efficiency?

There was disagreement on the value of the straps to loom opera-

tion. One plant states that with the endless straps shuttles are kept boxed more easily, while at least two other plants find loom performance did not improve with the installation.

Of the seven plants reporting on the use of endless check straps, five state that the straps run longer and can be justified on those grounds. One reports justifying their use on increased efficiency.

Mill T prefers the conventional strap, and reports the longer life of the endless strap is due to the looms not running as well.

TABLE 2

Performance of Plastic Or Molded Shuttles

Mill	Shuttle life in loom hours	Wear Caused by Plastic or Molded Shuttle on				
		Binders	Box Fronts	Pickers	Picker stick	Pick cam toes
K-1	4000 (plastic)	More	More	More	No change	No change
N	5000 both plastic and molded	*	*	No data	No change	No data
O	Twice that of dogwood	No change	No change	No change	No change	No change
S	73% improvement	More	More	More	No change	No change

* Excessive wear experienced at first was corrected by reducing power and aligning boxes.

Please give your experience with the plastic or molded shuttle as compared with the regular dog wood shuttle on the following items:

(a) Shuttle life in loom hours
(b) Cost
(c) Its effect on:
1. Binders
2. Box fronts
3. Pickers
4. Picker sticks
5. Pick cam toes

See Table 2 for some of the tabulated answers.

While there is general agreement that the plastic and molded shuttles cost more initially, the increased life of the new shuttles more than offsets that difference.

When you have difficulty with selvages:

(a) What do you recommend to stop slack selvages?

(b) What do you recommend to stop tight selvages and baggy cloth on synthetic ducks?

(c) What is the best selvage to use on all-viscose challis weaves to prevent tight selvages?

(d) In (c) above, would you use the same selvage when running all-viscose filling as you would when running blend filling?

The replies to part (a) comprise the following list:

1. Set forward motion of the lay the same at both sides
2. Equalize the pressure of the cloth roll against the takeup roll at both sides
3. Use straight cloth rollers
4. Use good bearings for cloth roller
5. Set take-up roller properly in good bearings
6. Use correct temple
7. Level the sand roller
8. Prevent binding in racks and gear trains
9. Level the loom beam
10. Beam properly
11. Keep selvage ends from building too close to beam heads
12. Keep selvage ends level with body of yarn on beam
13. Correct crooked beam heads
14. Change selvage weave to give more take-up
15. Replace worn take-up roll coverings
16. Keep whip rolls, cloth traverse, take-up rolls, and stop motions aligned
17. Time tape and harnesses together
18. Use good cloth tubes and good cones on sand roller
19. Run the temple as low as possible

Part (b) drew replies which in effect parallel those of part (a). They were different however, in the recommended selvage draws for synthetics.

Mill D recommends that the temples be capable of holding the cloth to its proper width, and that the selvage draw be experimented with to get the proper take-up there.

Mill S agrees largely with the recommendations of *Mill D*, and adds. ". . . may be overcome by different combinations of selvages (tape or plain). Also different methods and combination of the way selvages are drawn in the harnesses and reed. In other words, to allow more air space. We also have had good success with additional take-up roll cover directly under the selvage. We also use a filling catcher (Jiggers) to help prevent piling up the filling on the outside of the selvage [a condition] which . . . causes the selvage to have a cord effect."

For better maintenance of dobby heads:

(a) What is your method and frequency for cleaning?

(b) Do you have a regular maintenance schedule on dobby heads? If so, please state.

(c) What method do you use for preserving dobby bars?

By and large the plants clean the dobby heads when the warp is out. A solvent usually is used, and the loosened oil and lint blown out of the mechanism with compressed air. *Mill K-1* takes down and cleans heads completely once per year in addition to blowing off the heads at warp-out.

There is no regular schedule of maintenance in use among the plants reporting. Two mills check and replace worn parts at warp-out; one plant overhauls the head on the same schedule of loom overhauling; one plant holds the fixer entirely responsible for maintaining 1/3 his heads, and leaves the details largely to him; and two plants report a brief "no" to the question.

Two plants store the dobby bars in dry places before using them, and give no treatment beyond this. Two mills soak them in oil before using them.

Mill K-1 tried shellacking the

Jim Jordan, Pepperell Mfg. Co., Lindale, Ga.; A. B. Lee, Columbus (Ga.) Mfg. Co.; and John Mathis, Pepperell Mfg. Co. Lindale.

Representatives from the Trion, Ga., division of the Riegel Textile Corp. included Roy Brasil, Tom Price, and Leo Hancock.

bars before installing them, and then shellacking them once per year. Under that treatment the bars seemed to crack excessively, so the bars were soaked in linseed oil. This seemed to allow the pegs to fall out, so that treatment too was discontinued. The plant is still seeking the "correct" method.

What is the viscosity of the size you run, and how do you control the viscosity?

Size mix cooking time, storage temperature, and homogenizer pressure are quoted as means of controlling viscosity; while tests for viscosity are made with stop watch and cup, electronic viscosity meters and/or recorders, or combinations of such.

Mill O is equipped with a system which shuts off the steam and transfers the size to the storage kettles when the desired viscosity is reached.

Please give your experience in changing from low pressure two or three cylinder slashers to high pressure multi-cylinder slashers. List advantages realized from the change.

At *Mill B* a production increase of about 33 1/3% resulted from the change in slasher types. The plant is confident that the figure can be increased even more with the installation of other controls.

Mill G listed an improvement in stretch control and a production increase of 40% as a result of the change.

Mill N replaced three 3-cylinder machines with two 10-cylinder machines. The new slashers operate under a steam load of 35 psi, and produce warps of 4609 ends of 14.25s yarn at 70 yards per minute. Previously the best sustained speed was 42 yards per minute.

On an hourly basis, the increased speed effects a production increase of 65%; on a weekly basis, 47% (the down time for set changing makes the difference). The plant does not use magazine creels nor the larger types of section beams.

How do you add metallic yarn to warps? How do you maintain proper tension to prevent slackening or breaking during weaving?

In practically every case the metallic yarns are inserted in the weaving pattern at the front of the slasher. A simple creel is installed to hold the package and to permit even unrolling from package to package. *Mill I* threads the yarns over and under a series of three rods to supply needed tension.

Mill C beams the yarns when the number of ends exceeds 75, and mounts the beam at the front of the slasher. A leather strap at the head of the beam applies a small amount of tension. The plant notes that the metallic yarn should be kept on top of the cotton yarn to prevent twisting and stretching.

Mill O uses a similar system when the ends exceed 100. *Mill K-2* prepares warper beams, with the metallic ends run through the drop wires, and mounts the beams at the slasher front.

Mill R runs the ends in with plied warps which require no slashing. The ends are inserted at the beamer, and are run from a creel which permits the yarn packages to stand upright. The tension is applied through the friction between the unrolling packages and the creel. Beamer speed: 50 yards per minute.

Please give your experience with pneumatic press rolls and the traversing press roll. Give pressure used and increased yardage on beam. Have you been able to use a traversing press roll on yarn that has been over-waxed?

Ten mills replied, and ten mills reported an increase in the amount of yarns wrapped on loom beams. There seems to be no correlation between the air pressures used in the systems and the increases in beams weights.

This may be caused in part, as *Mill P* observed, by the pressure rolls being installed on conventional slashers in some plants, and on newer ones in other plants. As *Mill P* reported: ". . . The first unit was installed . . . on a slasher with three-stage friction drive and traversing press roll. On this delivery about 11½% increase was obtained. Since the drive and press roll modifications had already resulted in more yards per beam than conventional deliveries, there was not as much potential on the new device on this slasher as on the old conventional deliveries . . . on the conventional old type . . . around 20% was obtained."

The increases reported, along with the pounds of air pressure used, follow:

Mill	Increase %	Air pressure (psi)
B	10	—
I	10	60
J	15	—
K-2	30	60
N	10	32
O	10	30
P	11½-20	20
Q	20	40
T	12	42
U	9	45

At *Mill Q* over-waxing caused the traverse roll to become so slick that it would not traverse, while *Mill U* reports using a traversing press roll on such warps.

Do you strike or pick your

leases? What are the advantages of your method? Give number of ends, size of yarn, and width of cloth.

There were 15 answers to this question, all of which list picking as a method used. Four also strike leases when possible.

Mill B strikes leases on warps of 2500 ends, but counts the first 25 or 30 ends in each selvage. Warps of fewer than 2500 ends are picked.

Mill K-2 strikes the lease on all narrow cotton styles if the comb doesn't have to be widened, and feels that such leases are as good as are those counted in. Thus the plant does not strike wide goods because the loom beams are wider than the section beams.

Mill O picks about 75% of its patterns, and strikes the balance. The plant noted that picking creates less waste than does striking.

Mill S picks some sets which have a small number of ends. Picking such leases gives the plant a smoother warp—some are picked because of comb length. Those warps which permit it are struck, a practice which "saves some down time and also some soft thread waste."

Do you have difficulty in controlling stretch? Give standard, and limits allowed above standard; also, give type of slashers, type of goods made, and their widths.

For ease of comparison, most of the stretch figures are entered in Table 3.

At *Mill O* the slashers are equipped with mechanisms for controlling the stretch from the size roll to the delivery roll. The section beams are equipped with ball bearings, and receive their braking from weighted ropes. The stretch is from 1.5% to a high of 3.0%. Management feels that on a set of ticking (5600 ends of 12s yarn) 2.5% stretch prevents much rolling of warp ends. The fabrics include shirtings, suitings, upholstery goods, and automotive fabrics.

The type of drive used at *Mill S* permits controlled stretch ranging from 1.0% to 1.5% on sheetings, and from 2.0% to 2.5% on twills.

Mill T has tension controls on each slasher, and runs 1.5% stretch on 24s and 26s yarns. The stretch on the coarser yarns from 13s to 18s is kept at 2.0%. The fabrics produced include sheetings, drills, twills, sateens, and drapery cloth.

TABLE 3

Amount of Warp Stretch (%) at Slashing by Fabric and Slasher Types

Mill	Stretch From	Stretch To	Slasher Type	Fabric	Remarks
B	2.0	2.5	3- and 9-can	Osnaburg, ducks, etc.	Instruments indicate stretch constantly
E	2.0	2.5	3-can	Osnaburg	——
G	1.9	2.0	9-can	Corduroys & osnaburgs	——
J	1.0	2.0	2-can	Toweling	1.5 standard stretch
K-2	1.5	1.7	Hot-air & can types	Wide & narrow sheetings	——
N	—	2.0	Multican	Type 4 twill	1.75 standard stretch
P	—	2.0	2-can	Constructions from 14 x 10 to 80 x 80	——
R	1.5	2.0	3-can	Terry goods	
U	1.0	2.0	2- and 3-can	——	1.5 standard stretch

What per cent waste do you make in slashing? Show hard thread and soft thread waste; also, hard thread waste from weaving.

The answers are tabulated below:

Per Cent Thread Waste Produced

Mill	Slashing Hard	Slashing Soft	Weaving Hard
A	0.02	0.34	0.12
B	0.20	0.10	—
C	0.50	0.60	0.75
G	0.18	0.31	0.51
I	0.14[1]	0.19[1]	0.38
	0.25[2]	0.79[2]	0.48
J	0.76[3]	0.45	—
K-2	0.43[3]	0.28	—
M	0.20	0.18	0.25
N	0.17	0.43	0.21
O	1.20	1.00	0.30
P	0.20	0.25	0.21
Q	0.57	0.44	0.06
S	0.35	0.44	0.23
U	0.25	0.15	0.22

[1]White goods
[2]Colored goods
[3]Includes hard waste in weaving

How much variation do you have in size pickup?

(a) from one warp to another warp?

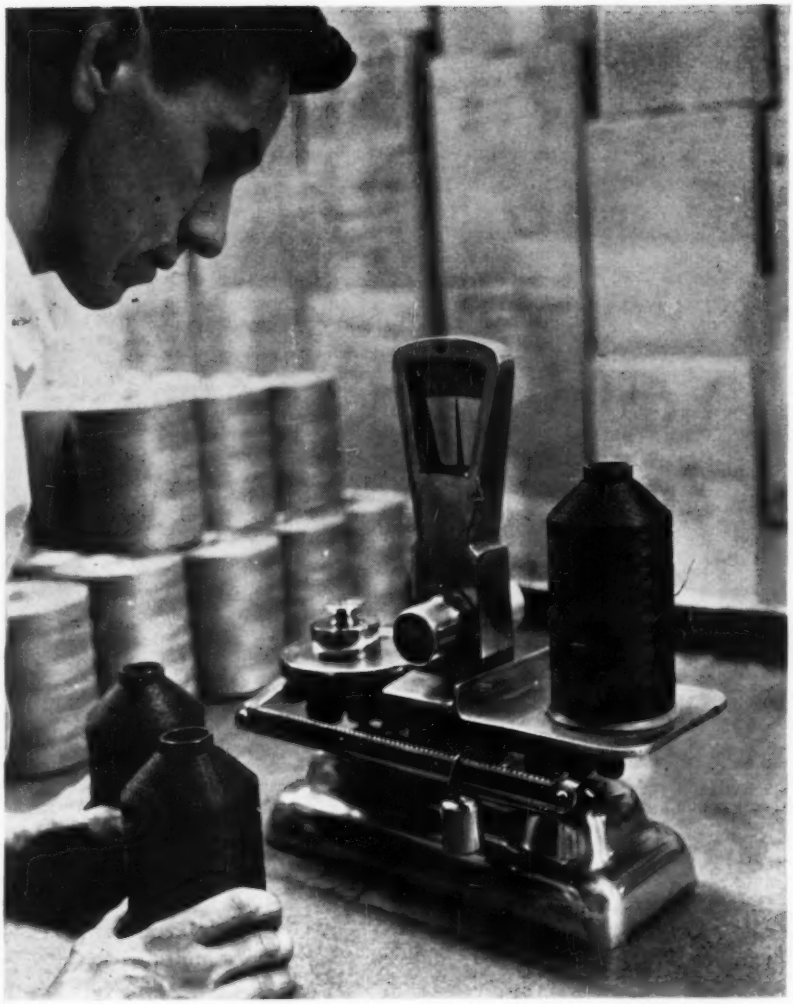
(b) across the width of the warp?

The per cent variations given are tabulated below:

Mill	Warp to warp	Across warp
E	1.0	No checks
G	2.5	——
I	0.5 to 1.0	Almost none
J	5.0	5.0
N	1.4 (±0.7)	——
O	Less than 1.0	Almost none
S	1.0 or less	0.2 to 0.4
T	0.25 to 0.5	0.25 to 0.75
U	0.4 to 0.6	0.1 to 0.3

Carpet industry survey

■ Tufted sales accounted for 47 per cent of total broadloom volume in 1956, a 900 per cent increase over 1951 . . . First seven months of 1957, retail carpet sales were ahead about 1 per cent over 1956 . . . Wool still major fiber, accounting for 80 per cent of domestic woven production . . . Procrastination by customers in reaching a buying decision is still the biggest industry selling problem . . . In six-month period, 6 per cent indicated intentions to buy, and only 3.2 per cent actually bought . . . Rug sales showed a significant decrease . . . wall-to-wall sales were up slightly . . . Industry objective — to shorten time between intention to buy and actual purchase; increase number of room-size rug sales. — *A. & M. Karagheusian, Inc.*



Cones are checked for correct weight of yarn. Although this is not a "production" operation, checking is quick and accurate on this unit, designated Model 103.

New scales in the dyehouse at Threads, Inc.

save time and insure accuracy

Staff prepared Exclusive

THREADS, INC., Gastonia, N. C., has found that accurate control of weights pays off in terms of consistency, improved quality, lower costs in the long run, and more customer satisfaction. Also, this company's choice of weighing devices has proved popular with employees who find them convenient, quick, and easy to use, as well as reducing eye strain, among other advantages noted.

With primary emphasis on dye house operations, the plant superintendent replaced old-type scales with modern weighing devices. Some of the more prominent applications are as follows:

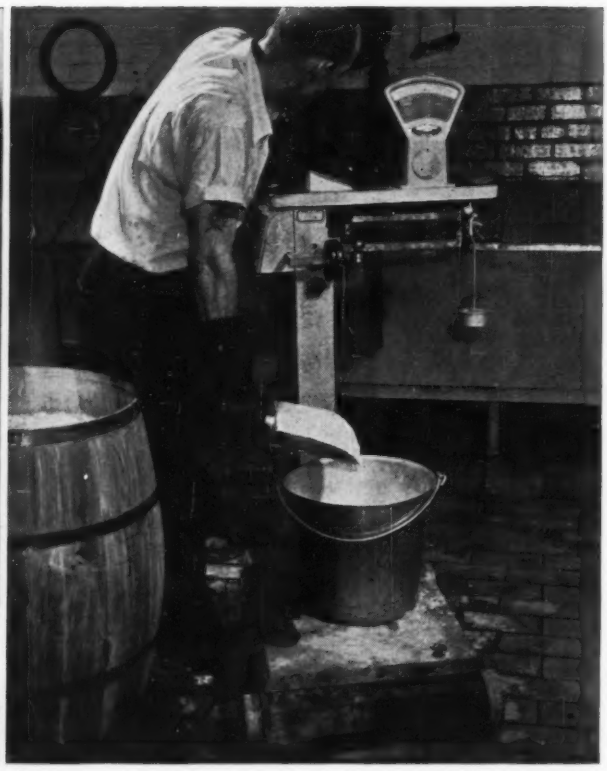
Three scales are located in the drug room. These are of different capacities and sensitivities. A Shadograph, Model 4204, has a capacity of 1500 grains with the scale dial graduated in ½ grains. This scale is used to measure small quantities of powdered dye. It is fully enclosed, easy to keep clean, and is accurate and easy to read, according to a mill spokesman.

Another Shadograph scale, Model 4102, is used to weigh larger quantities of powdered dye. This model has a 500-gram capacity, and the scale dial registers ¼ ounce over and under with 0.05 ounce graduations.

A third Shadograph scale, Model 4112 - HB, has a 22-pound capacity and is used to measure still larger quantities of dyestuffs. This scale has an illuminated scale dial showing one ounce over and under weight with ¼-ounce graduations. The beam is a one-pound graduation with 1/100th pound divisions. The mill has found that these scales do not require leveling, and the over - and - under illuminated dial provides good visual accuracy. The weight readings are projected on a ground glass dial, thereby reducing eye fatigue and errors. All three Shadographs provide similar advantages, a mill official indicated.

A PLATFORM SCALE, Model 4005-2, has a 500-pound capacity and is used somewhat generally for weighing dyes, wet or dry, up to the 500-pound limit. The dial has 2-ounce graduations with a total of 3 pounds over and under on the dial. A 50-pound graduation on the beam includes ¼-pound divisions. This scale replaced a

Operative weighs powdered dyestuff on Shadograph. This model weighs quantities up to 500 grams and gives a direct reading showing ¼ ounce over and under.



Platform scale weighs dye, wet or dry, in quantities up to 500 pounds. Dial has 2-ounce graduations, clearly visible; operator had difficulty seeing graduations on old scale.

similar scale because the operator had difficulty seeing the graduations on the old scale. Now, accuracy is to within ½ ounce on the new platform model.

For weighing cones, this mill uses a unit identified as Center Tower Scale Model 103. Cones are checked to ascertain that they contain the correct weight of yarn. Checking is quicker and more accurate on this unit than on others tried in this mill. This scale is used largely as a checking medium and is not a "production" operation.

Although scales are used in various other applications throughout the plant, the forementioned examples are outstanding and contribute notably to the over-all quality control operations of the mill, according to the plant superintendent.

The scales used for weighing dyes save time in weighing and produce more uniform results in dyed goods. The Shadographs provide a direct reading quickly and with a minimum of fluctuation, and the mill is planning to replace several more scales in the lab with Shadograph units.

The scales at this mill were supplied by the Exact Weight Scale Co.

How to prevent barre effect when dyeing heat-textured filament nylon

■ DEVELOPMENT of a procedure which enables dyeing of heat-textured filament nylon free from barré effects has been announced by Sandoz, Inc. It consists of a line of acid dyes especially for use on nylon, the Sandonyls; a new chemical leveling agent, Lyogen P; and a dyeing formula applicable on all standard machines.

The new procedure was recently described and demonstrated for the benefit of the producers and dyers of Ban-Lon fabrics. By eliminating barré effects, the Sandonyl process removes an important barrier to the use of better quality dyes on all heat-textured filament nylon knitgoods, said A. T. Hanes, a Sandoz official.

Use of the Sandonyl colors plus a tested group of bright shading Sulfonine dyes, with Lyogen P, will give 40-hour light fastness on most shades. Exceptions, noted thus far, are a jade green, a bright violet, and a turquoise. The company's colorists are attempting to bring these three up to the level of the others.

A comparison of wash tests indicates that Ban-Lon, dyed by the new process, does not lose color or stain adjacent fibers—is an important feature for knitwear which is going to be washed in home laundries.

Little or no increase in cost is involved.

As with other dyeing and finishing procedures, proper scouring before dyeing is an important point in producing the best work. Mill tests in the Philadelphia area indicated that a scour with a combination of Rinfors S and Sandopan DTC crypto-anionic detergent will remove the sizes and knitting oils before dyeing.

Panel members at the Carders' Guild meeting, l-r: Charles Bean, superintendent, Mercer Yarn Co., Philadelphia, Pa.; Edward Kelton, yarn superintendent, J. P. Stevens & Co., Franklin, N. H.; William F. Neumann, superintendent, yarn division, A. & M. Karagheusian, Inc., Roselle Park, N. J.; Russell L. Brown, head, wool department, Lowell Technological Insititute, Lowell, Mass.; Charles Aulerich, overseer of carding, American Felt Co., Franklin, Mass.; James Mansfield, carding specialist, Davis & Furber Machine Co., North Andover, Mass.; and Owen Staples, overseer of carding (retired), Andover, Mass. *Davis & Furber*

Standard drafts for wool mills

were disussed by carders during the recent NAWWO meeting in Boston

Staff report

A HIGHLIGHT of the 74th annual convention of the National Association of Woolen and Worsted Overseers, held on November 8-9 at the Manger Hotel in Boston, was the Carders' Guild round-table discussion devoted to pertinent carding problems. Professor Russell L. Brown, Head of the Wool Section of Lowell Technological Institute, served as moderator of the session, in which members of the audience also participated.

The first topic discussed by the panel was how to develop a preventive maintenance program in a small mill. There was general agreement that mill management's support is essential if such a program is to accomplish its chief objective; namely, the prevention of major repairs.

Several members indicated that maintenance was primarily the overseer's responsibility and that he should make an effort to inspect his machinery at least once a day. This includes checking on bearings, gears, belting, and other critical parts. One member of the audience stated that at his mill one individual, with the title of maintenance supervisor, is charged with carrying out inspection and lubricating schedules. It is important, however, that the proper man be assigned for this job.

In answer to the question, what constituted a small card room, one member considered a card room with 8-10 sets as falling into this category. It was recommended that a maintenance program, regardless of card room size, should emphasize proper and systematized lubrication, cleaning, and grinding cycles with an adequate supply of parts on hand to prevent costly delays.

Another member stated that the cards in his department were given a major inspection each week at the time of shutdown, with periodic inspections carried out during the week. Each shift, he continued, has a foreman and second hand. In their program, he said, even though they can tell with great accuracy when aprons and tapes will require replacement, periodic and thorough inspection is assurance of good card performance.

As to the question, how many

hours will a card run without grinding, it was indicated that the stock was the controlling factor. When processing fancy work, for example, closer settings were required.

Where Is Yarn Weight Controlled? The problem (Is it still necessary to adjust yarn weight by changing the draft in spinning, in view of the many improvements made in card feeds?) received much comment in which both schools of thought expressed their views. One panel member, strongly in favor of standard draft, cited two mills that adhered to this practice. In these mills, yarns, ranging from the finest to the coarsest grades, are processed with satisfactory results and draft changes are made only with lot changes. The important factor is to keep yarn weights constant even when small variations in weight occur.

Although this view received support, the opposing school of thought stated that it is difficult to control weights on the card in the light of temperature, humidity, and human element variations. This, added to the fact that many frames spin from a six- to eight-spool supply, while most cards make only four spools to a doff, makes spinning draft changes a necessity, especially on fine yarns.

Other comments pointed out that in many cases within-card roving variation is as great as doff-to-doff variation; that a compromise is often made by telling the spinner of off-weight roving for his convenience, thereby avoiding a high roving waste factor; that sometimes a quick check on greatest roving weight variation can be made by having the spinner compare the largest and smallest spun bobbins from a doff.

One member of the audience discussed the human element in carding, stating that his company began an employee training program which has resulted in a minimum number of changes in drafts. In addition there is a quality control program with test data reported to the department for its guidance.

Matching Condenser Aprons Important. What are some of the causes of roving weight variation between different spools on the same card? The panel established that to begin with, all gear ratios, drafts, etc., involved in the card condenser must be checked out and must be alike for all banks. Some roving weight variation from bank to bank will always occur because of the "two-faced" nature of the web — the upper side is relatively smooth and tangled, while the underside is hairy. The result is differential dividing by the tape divider system.

One aid to more efficient web dividing is larger diameter dividing rolls, which give a smoother and better controlled dividing.

An important factor that is often overlooked is the matching of condenser aprons. Many carders in replacing a worn apron will set the new apron against an old worn apron which has different running properties. In the case of new leather aprons, it was recommended that a complete set for a condenser be matched to each other for weight, as variations in tannage methods cause variations in apron characteristics and weight.

Peralta Pressures Discussed. What is the correct pressure to use on the offset-type Peralta roll system? The amount of offset and the pressure applied have to be matched. In general, however, the offset Peralta requires only 1/3 the operating pressure of the older-type crown Peralta system.

One mill arrived at this figure by splitting one card lot into two parts, processing one part on a new crown ground Peralta system, the other part on a new offset Peralta system and evaluating the results. For medium web work, the common offset distance is ¼".

Why Dark Colors Card and Spin Poorly. The final problem discussed by the panel had to do with the poor carding and spinning properties of dark colors in contrast to light colors. There was general agreement that scouring and dyeing played a big part in causing subsequent difficulties in yarn manufacturing, plus the fact that the presence of large quantities of dye on the fiber changed it physically, thus reducing its pliability.

Sheep and wool advisory unit urges research to aid processors and growers:

■ STRENGTHENED comprehensive studies of sheep production and utilization of meat and wool were favored by the U. S. Department of Agriculture's Sheep and Wool Research and Marketing Advisory Committee at its recent annual meeting.

The committee agreed that this program, along with expanded studies on the quality and yield of lamb meat as influenced by production practices, mechanical processing of chemically modified wools, development of wash-and-wear wool garments, and improved serviceability of wool floor coverings, were among the top needs in sheep and wool research.

Detailed recommendations for research to be undertaken in fiscal year 1959 will be submitted to USDA by the committee in the next few weeks. Copies will be available from the group's executive secretary, Henry W. Marston, Office of the Administrator, Agricultural Research Service, U. S. Department of Agriculture, Washington 25, D. C.

New Officers. Alfred O. Preuss, Glastonbury, Conn., was elected president, succeeding Emil H. Tegtmeier. Other officers are as follows: Henry C. Laponsee, 1st vice-president; Gregory L. Tite, 2nd vice-president; Arthur L. Mullen, 3rd vice-president; Fred J. Leibold, treasurer; Sullivan Gillette, assistant treasurer; Joseph F. Nash, assistant secretary; Re-elected as secretary of the association was James J. Burns, Holyoke, Mass. Emil H. Tegtmeier will serve as chairman, Ways and Means Committee. Edward L. Kelton, William F. Neumann, and Francis D. Herbert will serve the association as trustees.

Textile EQUIPMENT DISCUSSED AT A.I.E.E. MEET

Staff report

APPROXIMATELY 225 engineers attending the Textile-Electrical Conference sponsored by the American Institute of Electrical Engineers at North Carolina State College, Raleigh, N. C., heard C. L. Griffin of the General Electric Co., explain the basic steps to insure optimum performance and minimum maintenance of range drives.

After installing the drive equipment, the following checks should be made, according to Mr. Griffin:

(1) Check the alignment and balance of all rotating equipment and wiring: M-G sets, motors, and tachometers.

(2) Measure the insulation resistance of the rotating equipment and wiring.

(3) Check interconnecting wiring against the diagram furnished with the drive.

(4) Check the control sequence.

(5) Check rotation, speed, and speed range of the motors while they are uncoupled from the ranges.

(6) Make a final control check and record the resultant settings, including exciter voltage, motor field voltage, and generator field voltage, with the speed adjusting rheostat at minimum, half, and maximum speed positions.

(7) Check the driven machine to be sure it is ready for operation.

(8) Start the range and make any required final drive adjustments.

After the range is started, maintenance should be organized into a simple sequence of steps as follows:

(1) Gather complete equipment data.

(2) Determine the extent of routine maintenance.

(3) Establish a routine operating-control system.

(4) Evaluate for critical maintenance.

(5) Establish a critical maintenance program.

One mill has claimed to be able to schedule 80 per cent of the maintenance work required, and in a relatively short period of time their maintenance labor has been reduced more than 50 per cent by following the organized procedure, Mr. Griffin concluded.

PROGRESS in modernizing a cotton mill from 1940 to the present time was described by George

Banquet speaker was John W. Harden, vice-president, Burlington Industries.

About 225 engineers attended the Textile-Electrical Conference sponsored by the A.I.E.E. and held in the Riddick Laboratories Auditorium at N. C. State College.

Open-forum was conducted by J. Dan McConnell, Southern Electrical Equipment Co.

Speakers at the meeting included (left to right): Milton C. May, TEXTILE INDUSTRIES; E. P. Turner, Diehl Mfg. Co.; George V. Fowler, Henderson Cotton Mills; and E. R. Burgin, I-T-E Circuit Breaker Co.

V. Fowler of Henderson Cotton Mills, Henderson, N. C. The level of light intensity in the weave room was improved from 8 foot candles to 35 foot candles, line shaft drives have all been replaced by modern individual motor drives, and machinery in all departments has been replaced with modern units boasting the latest refinements.

The changes effected during the past 17 years have resulted in a smoother operating mill and a higher quality product to meet market demands, Mr. Fowler said.

Expansion and modernization are still in process at this mill which is currently adding 20,000 square feet for twenty additional new spinning frames and the equipment necessary to supply the raw stock for them, Mr. Fowler concluded.

THE TEXTILE INDUSTRY is changing so fast, from month to month, from day to day, that the most appropriate comment about what's new in the industry may be: "It's in the book!" Milton May of TEXTILE INDUSTRIES told the audience. The "book" referred to in this instance is the trade paper that serves your industry, the speaker said.

Trade magazines serve as a record for developments in the industry and should be used as a reference and as needed to help in doing a better job in the plant. After enumerating several advantages of writing signed articles for the man-in-the-plant, the speaker continued by reviewing some recent developments in textile machinery.

Among those items mentioned was a servo unit reportedly under development for controlling uniformity on drawing and roving. This device is said to employ beta rays in the sensing element.

A shuttleless loom under development by Draper Corp. is to run on medium and coarse goods fabrics and is scheduled to be shown within a year.

An automatic filling magazine by the Draper Corp. is proving successful and is on limited trial in three mills in the South.

A mechanical device for producing even roving which was developed by Dr. Hugh Brown is called the "sliver evener."

A vacuum slub catcher for winders is successful in increasing winder output 15 per cent.

High tension flyers for roving frames puts 40 per cent more roving on bobbins.

Aldrich-Lummus fiber blending system blends 1200 bales of stock and makes mathematically accurate blends with attendant labor savings in that it uses baled stock instead of binned stock. This system is said to permit representative fibers from 1200 bales in every foot of yarn produced.

Also described were:

An air jet loom which operates with no shuttle.

The British Tumack shuttleless loom.

An electronic edge guide control.

A single-section full-fashioned outerwear machine.

A new model gill reducer which boosts production 50 per cent.

A cut-and-uncut pattern machine for tufteds.

The new Rotaspray Weathermaker air conditioning unit.

The "Fabulized" finish which makes synthetics feel like natural fibers.

The Super J comber which produces high quality work at 150 nips per minute sustained production.

A machine called the Photoelectric Pantograph for engraving printing rolls electronically.

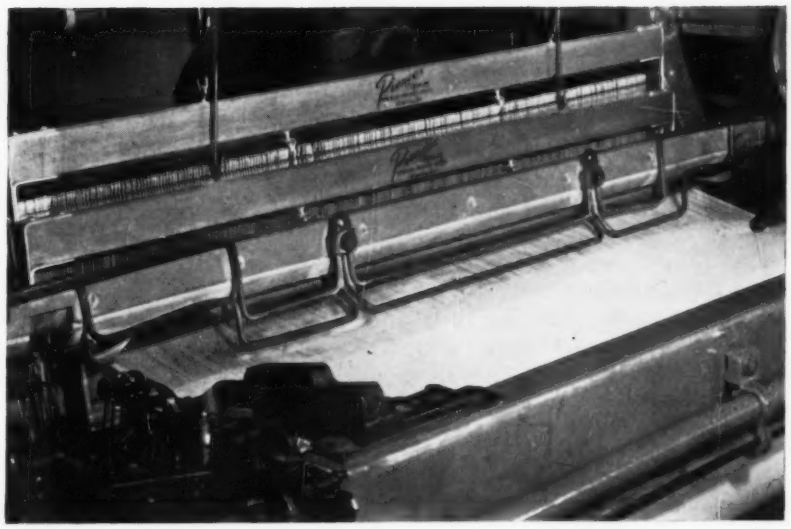
The meeting was concluded with a brief open forum covering questions arising about the papers presented on the program.

Curtailment came in nick of time—Jones

■ MILL curtailment announcements "came in the nick of time to save the industry from complete demoralization caused by falling prices and excess inventories at the mill level," says Halbert M. Jones, president of Waverly Mills, Inc., and first vice-president of the American Cotton Manufacturers Institute. Mill announcements of Thanksgiving and Christmas curtailments are the correct, if unpleasant, remedy for the textile industry's prolonged price depression, he said.

"It was not a matter of whether to curtail, but rather of when. It's no secret that our problem is and has been overproduction, but mill men in the South have been reluctant to curtail because they feared for the welfare of their employees. The advisability of such a move has been plain for some time," concluded the North Carolina mill man.

Allowing a bad quality condition to prevail, even if it is acceptable to the customer, is questionable policy.



A safer attitude is:

If cloth is wrong, it's wrong!

by Robert Bayles
Exclusive

TAKE the case of the reedy cloth. Once in my experience a particular style we were weaving for the garment cutters was being subjected to a drastic bleaching and dyeing operation which shrank the cloth considerably. I knew that when I made out the weave room production schedule and placed the style on a group of looms which were suited to the operation.

Previously my second hand and I had discussed at length some reediness in the fabric head end we had submitted. He assured me that the take up rolls were lifted as high as they would go, and that all other measures we could reasonably adopt to prevent the reediness had already been taken.

The sample was approved as we wove it, so I dismissed the reediness as being a characteristic of the fabric. After all, the reediness was confined to four looms we all knew were misfits in our weave room. They were of a different vintage, loom order, and temperament—nothing we could do on the other looms was acceptable to that four.

However, all other looms on the style were making the fabric free of the reediness, and knowing that, I suspected that my second hand had been a bit premature in his assurances that the reediness could not be removed from the four looms by any means known to a loom fixer. But the style was acceptable to the cutters, and I was busy as I could be. . . .

There was one person in the plant organization (the president) who was from that state, figuratively, where everyone must be shown before he will believe. Furthermore he was quite capable of belaboring a point.

He one day was conducting a guest through the plant, and as fate always betrays overseers, he stopped at one of the "four" looms to show the guest the good style he had just sold. The reediness hadn't improved with age.

To him there was nothing academic about reedy cloth. In fact he seemed aware of only one thing: I was making enough bad cloth on that one loom to break him, or so it seemed from the noises he was making. Try telling the boss at such a time that *that* reediness always comes out in the wash.

One of my more intrepid fixers was working nearby, joyously (it seemed) leveling a set of heavy harnesses. The "four" were on his job, so I waved him over and asked him to raise the drag roll stands to their top limit. After all I had to show the boss that the loom would weave only reedy cloth.

The stands were already at their highest point, so to make a further pretense, we checked the stop motion girts and managed to give them a token lift. Then we went to the take up rolls. . . .

My second hand had been almost correct. True, the take up rolls were at their topmost setting, but not quite. There still was enough movement possible to take out the last sign of reediness, as we reluctantly proved. The fixer returned to his harnesses, the boss went his way with his guest; and I went in search of a certain secondhand.

In all respect to that president, I must say that he did know something about a cotton mill (after all, he owned most of that one), for as I had learned, reedy cloth is not right even if I am "too busy" to find out why it was faulty.

He knew that it was dangerous to allow such a condition to go uncorrected, for the impression might linger among the personnel at a

time wnen we could not afford reedy cloth. If it's wrong, it's wrong, and the timing can't make it right.

That style offered problems other than the reedy yards we first turned out. The stuff was really a sleazy weave compared to the fabric we had just taken off those looms. The change from a hard texture fabric to a soft one left a few details in loom fixing we had to clear up. One was selvages.

The cloth was so soft that it had to be woven with a minimum of warp tension to keep the proper width, and with a minimum of shuttle tension to keep the button holes out of the selvages. That proved simple in that we only had to remove most of the shuttle fur (we left a ¼" strip the length of the quill) and leave two sets of bristles. Some of the shuttles had to be reworked to get the quill to line up with the shuttle eye. That required "resetting" the shuttle springs by hammering them back to position while in a vise.

The hard texture fabric had been woven with heavy filling, and the great number of transfers caused the springs to let the quill tip drop too low in the shuttle. Each time a wrap of filling left the package it was forced to free itself from the bottom of the quill. The tension was just too much. Tape selvages were not allowed.

Although filling breakage was not a grave problem ever, the style required so much less take up pull that some of our fixers failed to reset the tension on the take up clutches, and several howls from our weavers about poor let-back on filling breakage were necessary before we really believed it.

Being a freshman overseer at the time, I was prone to accept in good faith too much which was given in good faith. That secondhand had no intention of telling me a fib about the loom condition.

He was sincere enough, but his lack of appreciation of such fine points severely limited his chances of being promoted above the secondhand position he then held.

The loom fixers knew that the looms had to be tuned for a lighter fabric, that the letoff, take ups, and shuttles had to be checked out for operation on another style. But they were content to wait until such became "necessary" before doing it.

I, the overseer, was content to accept at face value each secondhand's interpretation of what was correct. That "simple faith" ended right there. We evolved a system of checks and double-checks which left no doubt as to who was responsible for what.

Silk Congress termed valuable to world silk trade

■ THREE resolutions of major significance to the world's silk industry were formally adopted by the International Silk Congress at the conclusion of its recent week-long assembly at the Waldorf-Astoria.

Hughes Morel-Journel, of France, newly-elected president of the ISA, reported that the directing board established a special subcommittee to examine claims that Oriental exports of manufactured and semi-manufactured silk fabrics are becoming increasingly harmful to the silk industries of the United States and a number of European nations.

Mr. Morel-Journel and Sir Ernest Goodale, head of the British delegation, reported a resolution calling for changes in existing silk tariff regulations had come to the directing board from a special meeting of delegates representing the six nations of the European common market. These delegates proposed that raw and waste silk entering all six markets should be duty free, while imports of spun and thrown silk would carry duties as outlined in the Rome Treaty. The resolutions provided that damage to the Italian silk industry be repaid out of a special fund.

In another action, the directing board resolved that, prior to making proposed revisions in the standards for testing and classifying raw silk, complete examination of the merits of both the old and the proposed techniques should be made in practical weaving tests conducted in the United States, Japan, France, and Italy. Results of these tests are to be reported to the ISA world headquarters, Lyons, France, by June 30, 1958.

However, the board adopted a new classification for Dupioni silks to go into effect as soon as is practical.

The directing board also unanimously urged that Japan's $300,000 budget for promotional funds be substantially increased.

A highlight of the Congress was a silk forum and luncheon for delegates, invited guests and the press. Speakers included: A. W. Zelomek, president of International Statistical Bureau, Inc., New York; Sylvan Gotshal, board chairman of the American Arbitration Association, New York; Ichiro Haratani, head of the Japanese delegation; Robert H. Stehli, chief delegate from Switzerland, and Sir Ernest Goodale.

Mr. Zelomek said the silk industry has not fully utilized its important opportunities to re-establish silk as a major fiber in the U. S. fashion field. Reviewing the upward trend of the post-war economy of expansion, including increased "luxury" spending power, he added, "higher priced apparel of silk has now, more than ever before, the chance to get a bigger share of the consumers' dollar." In order to gain a larger share of the fashion market, Mr. Zelomek suggested that leaders in the world's silk industry begin an immediate marketing and merchandising study designed to accomplish their goals within the next five to ten years.

Mr. Gotshal, member of the New York law firm of Weil, Gotshal and Manges, spoke on the necessity of private arbitration practices in the silk industry to police against plagiarism and design piracy of fabric styles. He recommended that provision for arbitration of disputes between members of trade associations be set up as an effective supplement to enforcement of fair trade practice now being sought through legislation.

Mr. Haratani, president of Gunze Trade Company, Tokyo, reported that Japanese raw silk production has increased from 100,000 bales in 1946 to almost 320,000 bales this year. He predicted that production would increase to 380,000 bales by 1962, especially with continued improvements in sericulture techniques and the introduction of new automatic reeling equipment.

The next congress is scheduled for May, 1959 in Germany.

Speakers at the symposium on waste disposal, l-r: R. H. Souther, Cone Mills Corp.; J. C. Knox, New England Interstate Water Pollution Control Commission; G. C. Bogren, Weston & Sampson; George O. Linberg, national president, AATCC; and Duane Snyder, Crompton-Shenandoah Co.

Chlorine retention by resins

Identification of dyestuffs on textiles

Effect of resins on lightfastness of vat dyes

Activated hydrogen peroxide bleaching process

AATCC convention report

Staff report

BOSTON'S Hotel Statler was the scene in mid-November of the thirty-sixth national convention of the American Association of Textile Chemists and Colorists, as more than 1700 registrants from the textile and allied industries gathered for three days of technical sessions, exhibits, functions honoring distinguished members of the Association, and tours to places of textile interest in the Boston area.

The convention was sponsored by AATCC's New England Region, and in selecting Boston as the site of the meeting, the Association was returning to its birthplace—the inaugural meeting of AATCC was held there on November 3, 1921.

First prize in the annual Intersectional Contest for the best research paper was taken by the Piedmont Section, for its paper, "Relation of the Effect of Resins on Light Fading and the Tendering Action of Photosensitive Vat Dyes." [See page 105.] This was an extension of the work which won the 1956 prize for the Section.

Second place in the contest went to the Metropolitan Section for a report on a systematic procedure for the identification of dyestuffs on textiles (see chart on page 101); and the Southeastern Section took third place for work on contaminants in peroxide bleaching.

The Association's 1958 convention will be held at the Conrad Hilton Hotel, Chicago, October 30-31 and November 1, with the Mid-West Section as hosts.

Abstracts of several of the papers presented at the technical sessions of the convention are given on pages 100-106.

Winners of the Olney Medal posed at the convention; back row, l-r: Raymond W. Jacoby (1951), Miles A. Dahlen (1955), Walter J. Hamburger (1956), and Werner von Bergen (1952). Front row, l-r: William D. Appel (1954), P. J. Wood (1957), William H. Cady (1946), and Milton Harris (1945).

Effect of laundering on chlorine retention and crease resistance

by Osborne C. Bacon*

E. I. du Pont de Nemours & Co.

Abstract

THE PRINCIPAL objective of this work was to obtain improved finishes on cotton with dimethylol ethylene urea (DMEU) which would show no chlorine retention damage after repeated home launderings and bleaching. This objective must be accomplished while maintaining a high degree of crease resistance and at the same time maintaining acceptable fabric tensile strength and whiteness retention. DMEU has shown considerable promise of meeting this objective where alkaline laundering without souring is practiced.

An outstanding feature of DMEU finishes, when properly applied, is their good resistance to damage from chlorine retention. It is recognized that the catalyst system and processing conditions employed do have a pronounced effect on this property.

Method of Attack. The extent of chlorine retention damage depends on several variables:

1—Preparation of fabric
2—Selection of catalyst
3—Curing time
4—Curing temperature
5—Neutralization wash

The first four variables determine the completeness of the curing reaction. An alkaline fabric will neutralize the acid catalyst. Therefore, a carefully prepared fabric was selected to avoid alkalinity.

The catalyst should be selected for maximum activity without damage to the fabric. The catalysts were selected to obtain increasing activity, believed to be in the following order: alkylol amine hydrochloride, magnesium chloride, zinc nitrate.

The curing time and temperature have a very considerable effect on catalyst activity. A curing time of one minute was selected to approximate high speeds in mill production. A temperature range was used to determine the optimum curing temperature for the various catalysts in a one-minute cure.

The effect of a neutralizing wash was studied to establish its importance.

Experimental. The reactant type finish used was 50% dimethylol ethylene urea containing approximately 1.5% free formaldehyde. The catalysts used were reagent grades of magnesium chloride hexahydrate and zinc nitrate hexahydrate, and an aqueous solution of 40% alkylol amine hydrochloride having 10% of the amine unneutralized.

The fabric employed was a 2.85 yard per pound 80 x 80 cotton sheeting. This fabric was prepared by kier boiling, bleaching, and rinsing free of chemical to provide an absorbent neutral material.

The DMEU was applied at 4% on the fabric weight from an aqueous bath containing 4% DMEU, 0.05% glacial acetic acid and 1.2% (on the weight of the bath) of one of the catalysts.

Summary. The conclusions from this work are:

1—Excellent resistance to damage from chlorine retention initial-

(Continued on page 105)

*Coauthors: J. Edward Smith and Lehman E. Hughes.

Fig. 1. Effect of catalyst, curing temperature, and ten launderings on crease recovery over untreated control (150 F), warp plus filling.

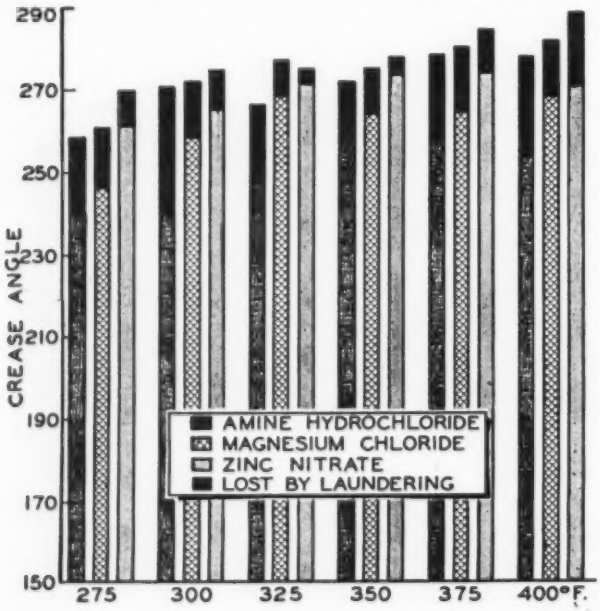
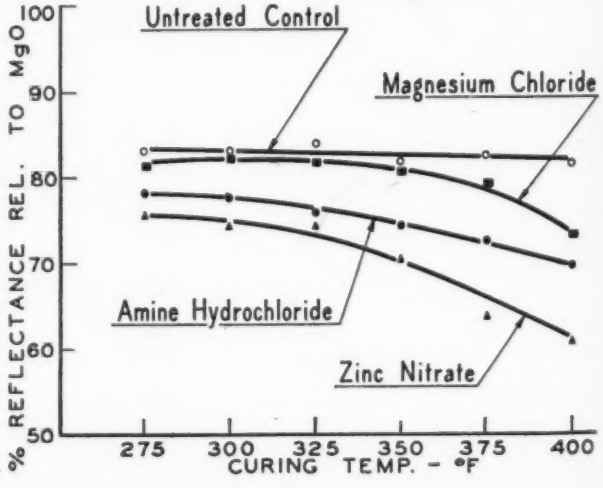


Fig. 2. Effect of catalyst and temperature on faric reflectance at 400-millimicron wavelength as measured with spectrophotometer.



	Group I			
	A—Direct	**B—Acid**	**C—Basic**	**D—**
Cotton and Rayon	Add 5-10 cc water, ½-1 cc conc NH_4OH; boil to bleed off dye. Remove stripped sample, add white cotton, add 5-30 mg salt, boil 40-80 sec, cool, rinse. Direct dyes are present if sample is dyed to approximately original strength.	If sample "A" bled but left cotton white or slightly stained, neutralize extract with acetic acid, add 1 cc 10% acetic acid. Boil white wool in extract for ½ min; rinse. Redyeing of wool proves presence of acid dyes, if directs and basics are absent.	If "A" bleeds slightly or not at all, take fresh sample, add ¼-½ cc glacial acetic acid, warm, add 3-5 cc water, boil, remove sample. Add 5-20 mg Orlon 42 or tannin mordanted cotton, boil 60-80 sec. Redyeing proves presence of basic dyes.	If " ly or basic take f 10-15 20-40 add f peat If spond rect with

	A—Basic	**B—Direct**	
Wool and Silk	Add 10 cc alcohol to 100-400-mg sample; boil. Remove sample, evaporate solution almost to dryness, add 5 cc water, boil to remove alcohol. Add ¼-½ cc 10% NaOH, cool, add 5 cc ether, shake. Pour into 10-cc test tube, let layers separate, decant most of ether layer into another test tube, add few drops acetic acid, shake. Basic dyes change to salt form and appear in acetic acid layer in same shade as dyed sample.	Boil 200-300-mg sample for 1-2 min in 5 cc water and 1 cc conc NH_4OH. Remove, add 30 mg NaCl; put 10-30 mg white cotton in solution for 1-2 min, remove and rinse. Direct dyes dye cotton a deep shade (acid dyes may stain the cotton).	Same pr "A," but neutralize and add a 20-40-mg s Redyeing ence of ac soluble n present. If acid dyes union dye dicated.

	A—Vat	**B—Acid**
Acetate and Arnel	Boil sample in 1-2 cc 20% NaOH for 1-2 min. Add 4-8 cc water and 15-30 mg $Na_2S_2O_4$ and boil ½-1 min. Remove sample, add 15-30 mg NaCl, boil 25-50 mg white cotton for 40-80 sec, cool. Remove cotton, place on filter paper to oxidize. Redyeing of cotton to shade differing only in strength from original dyeing proves presence of vat dyes.	Add 5 cc 25% solution 2-methyl-n-pyrrolidone t in beaker of water. Bring water to boil, remove te sample. Add 3-5 cc toluene and 20-25 cc water to *Acid Dyes.* Water layer strongly colored, same toluene layer colorless. *Pigments.* Water layer milky; toluene layer m depending on type of pigment present.

Identification of Dyest

Metropolitan Section, AATC

	Group II			
D—Direct, Resin Aftertreated	**E—Sulfur**	**F—Vat**	**G—Vat Leuco Esters**	
If "A" bleeds slightly or not at all, and no basic dyes are present, take fresh sample, add 10-15 cc 1% HCl, boil 30-40 sec. Discard acid, add fresh portion; repeat once or twice. If sample now responds to test "A," direct dye aftertreated with resins is present.	*Preliminary.* Add 3-6 cc water and 1-2 cc 10% NaOH to 50-100-mg sample. Raise to boil, add 1-30 mg $Na_2S_2O_4$, boil for 2-5 sec. All Group II dyes change shade radically except Indanthrene Blues, which bleed profusely when $Na_2S_2O_4$ is added and only slightly, if at all, when NaOH is added. Place sample on filter paper; all Group II dyes reoxidize to original shade in 5-6 min.		*Indanthrene Blues.* Place ½ ple on several layers of filter of nitric acid. Blot sample w is pure yellow. Touch blot with a few dro tion (equal parts by weight and water); original blue c Blues is restored.	
	Add 2-3 cc water, 1-2 cc 10% Na_2CO_3 solution, 200-400 mg Na_2S chips. Boil 1-2 min, remove sample, add 10-20 mg NaCl, boil white cotton 1-2 min. Place sample on filter paper to reoxidize. Sulfur dyes redye cotton in shade same as original except for strength.	Add 2-3 cc water, ½-1 cc 10% NaOH; raise to boil, add 10-20 mg $Na_2S_2O_4$, boil ½-1 min. Remove sample, add 10-20 mg NaCl, boil white cotton 40-80 sec. Cool, remove sample, place on filter paper to oxidize. Redyeing to original shade proves presence of vats, if no sulfurs were present.	These dyes are water-soluble derivatives of vat dyes; on the fabric they are identical with ordinary vats. The identification procedure is the same as in "F."	

C—Acid	**D—Soluble Metallized**	**E—Chrome**
e procedure as Cotton, Group I but instead of adding NaCl, lize NH_4OH with 10% H_2SO_4 dd a few drops in excess. Boil mg sample of wool for 1-2 min. yeing of wool is proof of pres- f acid dyes, if direct dyes and metallized dyes are not t. If tests for direct dyes and yes are both positive, then a dyeing on wool-cotton is in- l.	Procedure is the same as under "C," then test for chromium as in Cotton, Group III "I."	Chrome dyes will not bleed in the dye has been formed in the fiber. B process may occur, but, redyeing wil In the case of dispersed (neutral dy of dyestuff can be extracted. Some r shade. To differentiate between "E" and Group III "I." If color of the flux is white, a neutral dyeing chromium me test for chrome with large sample.

C—Pigments	**D—Disperse Acetate**	**E—Developed Acetate**
ne to sample; immerse test tube e test tube in 20-40 sec, discard r to extract. Shake well. ame shade as original dyeing; r may be colored or colorless,	Proceed as in "B" and "C," but after discarding the sample, first exami the extract. *Dispersed Acetate Dyes.* Extract is same shade as original dyeing. Af addition of toluene and water, toluene layer is strongly colored in sha similar to original dyeing. Water layer may be colorless or slightly tinted, different shade from toluene layer. *Developed Acetate Dyes. (Cellitazols).* Extract colorless or different sha (usually brown) from original dyeing. After toluene addition, both lay colored in shade different from original dyeing (usually brown).	

Identification of Dyestuffs on T

Metropolitan Section, AATCC

	Group II				
—Direct, Resin Aftertreated	E—Sulfur	F—Vat	G—Vat Leuco Esters	H—Oxidation Blacks	I—Direct, Afte with Met
A" bleeds slight-not at all, and no dyes are present, resh sample, add cc 1% HCl, boil sec. Discard acid, resh portion; re-nce or twice. sample now re-s to test "A," di-dye aftertreated resins is present.	*Preliminary.* Add 3-6 cc water and 1-2 cc 10% NaOH to 50-100-mg sample. Raise to boil, add 1-30 mg $Na_2S_2O_4$, boil for 2-5 sec. All Group II dyes change shade radically except Indanthrene Blues, which bleed profusely when $Na_2S_2O_4$ is added and only slightly, if at all, when NaOH is added. Place sample on filter paper; all Group II dyes reoxidize to original shade in 5-6 min.		*Indanthrene Blues.* Place ¼-in. square of sample on several layers of filter paper; add 1-2 drops of nitric acid. Blot sample with filter paper; blot is pure yellow. Touch blot with a few drops of reduction solution (equal parts by weight of $SnCl_2$, conc HCl, and water); original blue color of Indanthrene Blues is restored.		*Preliminary.* NaOH, 20-40 m *Test for Cl* Completely as in No. 000 crucible, add mg of a flu parts Na_2CO $NaNO_3$); fuse mass is orang while hot and nent greenish when cold, in of chromium. *Test for Cop* as above, dis ¼-½ cc conc add 1-2 cc wa boil. Cool, ad conc NH_4OH tube. Blue color presence of co
	Add 2-3 cc water, 1-2 cc 10% Na_2CO_3 solution, 200-400 mg Na_2S chips. Boil 1-2 min, remove sample, add 10-20 mg NaCl, boil white cotton 1-2 min. Place sample on filter paper to reoxidize. Sulfur dyes redye cotton in shade same as original except for strength.	Add 2-3 cc water, ½-1 cc 10% NaOH; raise to boil, add 10-20 mg $Na_2S_2O_4$, boil ½-1 min. Remove sample, add 10-20 mg NaCl, boil white cotton 40-80 sec. Cool, remove sample, place on filter paper to oxidize. Redyeing to original shade proves presence of vats, if no sulfurs were present.	These dyes are water-soluble derivatives of vat dyes; on the fabric they are identical with ordinary vats. The identification procedure is the same as in "F."	These dyes do not redye cotton from Na_2S-Na_2CO_3 or $Na_2S_2O_4$ - NaOH. To confirm their presence, place sample in No. 1 evaporating dish, pour 2-3 cc conc H_2SO_4 over sample and rotate just long enough to extract dye. Pour extract into test tube, add 25-30 cc water, filter, wash. Spot filter paper with few drops of 10% NaOH. Spot turns red violet.	

C—Acid	D—Soluble Metallized	E—Chrome	F—Dispersed Metallized
ocedure as Cotton, Group I instead of adding NaCl, NH_4OH with 10% H_2SO_4 few drops in excess. Boil ample of wool for 1-2 min. g of wool is proof of pres-id dyes, if direct dyes and metallized dyes are not tests for direct dyes and are both positive, then a ing on wool-cotton is in-	Procedure is the same as under "C," then test for chromium as in Cotton, Group III "I."	Chrome dyes will not bleed in the test for acid dyes, since a water insoluble dye has been formed in the fiber. Bleeding of by-products from the dyeing process may occur, but, redyeing will not take place. In the case of dispersed (neutral dyeing) metallized dyes, only small amounts of dyestuff can be extracted. Some redyeing will occur, but in a much lighter shade. To differentiate between "E" and "F": Ash 20-mg sample as in Cotton, Group III "I." If color of the flux is yellowish, a chrome dye is indicated; if white, a neutral dyeing chromium metallized dye. Validity depends on positive test for chrome with large sample.	

C—Pigments	D—Disperse Acetate	E—Developed Acetate
sample; immerse test tube st tube in 20-40 sec, discard extract. Shake well. shade as original dyeing; ay be colored or colorless,	Proceed as in "B" and "C," but after discarding the sample, first examine the extract. *Dispersed Acetate Dyes.* Extract is same shade as original dyeing. After addition of toluene and water, toluene layer is strongly colored in shade similar to original dyeing. Water layer may be colorless or slightly tinted, in different shade from toluene layer. *Developed Acetate Dyes. (Cellitazols).* Extract colorless or different shade (usually brown) from original dyeing. After toluene addition, both layers colored in shade different from original dyeing (usually brown).	

Sample Size. Unless othe stated, tests are to be carried o a 100-300-mg sample of the dyed ric. A 35-cc test tube is to be used less another size is given.

Equipment. Sizes of test tubes other apparatus, amounts of sa and reagents, time of operation, are given as examples; the an may vary them to suit his per preferences or to identify an un

	Group III			Group IV	
	Aftertreated Metals	J—Direct, Aftertreated with Formaldehyde	K—Naphthols and Rapidogens	L—Diazotized and Developed	M—Pigments	
	ıary. Add 3-5 cc water, 1½-3 cc 10% -40 mg $Na_2S_2O_4$; boil 3-5 min. All Group III dyes are destroyed; reoxidation does not restore the shade.				These dyes usually do not respond to the reaction of the first three groups; if they do, the reactions are slower and often incomplete.	
	r Chromium. ly ash sample 900 porcelain add 50-150 flux (equal a_2CO_3 and fuse. Fused range yellow and permaenish yellow l, in presence um. *Copper.* Ash dissolve in conc HNO_3, c water, and , add 1-2 cc OH in a test olor indicates f copper.	Presence of formaldehyde is proof of use of these dyes. Heat to near boiling in 5% H_2SO_4, cool, add dropwise 0.1% carbazole dissolved in conc H_2SO_4. Blue precipitate indicates presence of formaldehyde.	Place 20-50-mg sample in 10-15-cc test tube; add 1-2 cc pyridine; boil. All naphthols bleed in pyridine; they reduce much more slowly in NaOH and $Na_2S_2O_4$ than other dyes of Group III.	Identified by exclusion of all other dyes in this group.	*Vat Pigment.* Test is the same as Group II, "F." Pretreatment with methyl pyrrolidone will plasticize the resin binder. *Azoic Pigments.* Heat 100-200-mg sample in ½-1 cc methyl pyrrolidone for ½ min, cool, add 1-2 cc 5% NaOH and 25-50 mg $Na_2S_2O_4$. Boil until sample is white, light yellow, or orange. Filter solution, add 10-20 mg NaCl, add white cotton, boil ½-1 min, cool, dry. Naphthol AS will be yellow; B-naphthol will darken and turn brown.	Cotton and Rayon

	G—Vat	H—Leuco Esters	I—Naphthol	
luble yeing ounts ghter otton, ed; if sitive	Boil 200-300-mg sample in 2.5 cc 10% NaOH until all wool is dissolved. Add 25-50 mg $Na_2S_2O_4$, 25-50 mg NaCl, and 10-15 mg white cotton. Keep near boiling 1-2 min, cool. Place cotton on filter paper 1-2 min; oxidize in $NaNO_2$ and acetic acid. Redyeing of the cotton indicates presence of vat dyes. In cases of very pale dyeings, it may be necessary to redye the sample in 2-4 successive solutions stripped from the original dyeing.	These are water-soluble, stable esters of vat dyes. They are identified as under "G."	Procedure for the identification of naphthol dyes is the same as under Cotton, Group III "K."	Wool and Silk

General Notes

otherwise ed out on dyed fab- used, un- tubes and f samples ation, etc., e analyst personal n unusual

sample. For example, in identifying the dyestuff used on a pale shade, it is advisable to use a large sample, to use larger quantities of reagent, and to concentrate the extract before making the tests.

Discussion. This brief outline of the dyestuffs identification scheme has of necessity omitted the discussion which accompanied the Metropolitan Section's paper. This will be given with the complete article, which will be published in an early issue of the *American Dyestuff Reporter*.

Committee. Members of the committee under whose direction the scheme was prepared include D. A. Shiraeff (chairman), General Aniline & Film Corp.; E. C. Hansen (secretary), General Aniline & Film Corp.; W. Brommelsiek, Forstmann Woolen Co.; C. H. Brubaker, Standard Bleaching & Printing Co.; M. Farber, United Merchants Laboratories, Inc.; P. J. Fynn, J. C. Penney Co.; A. J. Kellner, U. S. Testing Co.; J. E. Loughlin, National Aniline Division; P. J. Luck, Peerless Color Co.; D. Marnon, American Aniline Products; S. Mooradian, Geigy Chemical Corp.; B. F. Quigley, Du Pont Co.; F. C. Rippner, Carbide & Carbon Chem. Co.; P. B. Roth, American Cyanamid Co.; C. H. Schmidt, Sandoz Chemical Works, Inc.; M. G. Stern, Ciba Co.; and P. J. Wood, Royce Chemical Co.

Identification of Dye

(Continued from other

Nylon

Since nylon dyeings do not bleed in mediums from which redyeings can be made, procedures used for cotton do not apply. They can be stripped with "nylon reagent"—8 parts formic acid in 92 parts n-methyl-2-pyrrolidone.

Preliminary. Place 200-300-mg sample in 35-cc test tube, add 10-12 cc nylon reagent, and place test tube in beaker of boiling water. After sufficient dye has bled off, discard sample; extract is to be used for tests.

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Toluene Layer

A—Vat

Transfer toluene-water extract to 60-cc separatory funnel. Draw off water layer, wash toluene with 20-25 cc water 5 or 6 times to remove most of n-methyl-2-pyrrolidone. Filter into No. 000 evaporating dish. Evaporate on steam or water bath. Dissolve dry residue in 3-6 cc 5% NaOH to which was added 5-15 mg $Na_2S_2O_4$. Transfer solution to test tube.

Redyeing from above solution of 3-5 mg white cotton proves original was a vat dyeing.

B—Acetate

Pour another portion of original extract into 60-cc separatory funnel; add 10-15 cc toluene. Wash toluene 4-5 times with 20-25-cc portions of water. Transfer washed toluene to evaporating dish, evaporate on water or steam bath almost to dryness (½-1 cc). Add 1 drop 10% solution Blancol or equivalent and 5-7 cc water. Transfer to test tube, add 10-15 mg acetate and boil.

Redyeing of acetate proves original dyeing was with acetate dyes.

C—Metallized

If the ash of the original dyeing contains chromium, cobalt, or manganese, and the extract is in the toluene layer in the toluene test, then the original dyeing was made with neutral dyeing metallized colors of the Irgalan type.

D—Naphthol

Pour another portion of original extract. Treat with toluene and evaporate as under "B." Add 5 cc alcohol and 1 cc 10% NaOH, warm if necessary; transfer to test tube, add 3-5 cc water, boil off the alcohol. Add 10-20 mg $Na_2S_2O_4$ and boil until the azo dye is reduced, adding more $Na_2S_2O_4$ and NaOH if necessary.

When dye is reduced, add 5-10 mg white cotton and 10-20 mg NaCl. Boil for 1-2 min, cool. Remove cotton and place on filter paper.

If cotton is yellow in color, original dyeing was made with Naphthol AS series combination. Yellow fluorescence under UV when dry is further confirmation.

C—Dispersed Metallized

Ligroin Test. To 5-6 cc tetrahydrofuran and 10 cc portions until solution bec tetrahydrofuran until solu ligroin. A turbidity should bottom. Layer should be ½ furan proportion.

The ash contains cobalt, manganese, or chromium. Presence of chromium completes identification of this class.

When manganese is in the ash, the absence of direct cotton dyes must be confirmed. They bleed freely in the nylon reagent. Redyeing of wool is in the same shade as the original.

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Acrylic Fibers

Bleeding-Off Acrylic Fibers. Place 200-300-mg sample in 35-cc test tube, add 2 cc 40% solution n-methyl-2-pyrrolidone. Place test tube in beaker of boiling water and keep there until sufficient amount of dye has bled off (10-20 min).

Remove test tube from water and discard sample.

Toluene Test. Pour test tube containing 10 1 cc water, shake agai layers are well separat

Group I—Toluene Layer

A—Acetate

Presence of chromium, cobalt, or manganese in the ash of the original dyeing differentiates metallized dyes from acetates. To confirm, separate toluene layer in 60-cc separatory funnel, wash, evaporate. Disperse residue with drop of 10% Blancol.

Metallized dyes will redye on wool only; acetate dyes will redye on both wool and acetates—more heavily on acetate.

B—Metallized

Gr

C—Basic

Add 2 cc 10% NaOH to 15-cc test tube from toluene test, place in beaker of boiling water for a few minutes. Remove, cool, shake, allow two layers to separate. Decant portion of toluene layer into 10-cc test tube, add ⅛-¼ cc 10% acetic acid, shake well, allow to settle.

Basic dyes will color the bottom or acid layer in the shade of the original dyeing.

D—Acid

The ash of the origina ing contains no heavy and basic dyes have be cluded.

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Toluene Test. Pour 2½-5 cc of extract into 35 cc test tube, add 25 cc toluene and shake. Add ½-1 cc water, shake, then let separate into two layers. The distribution of the dyes will be as follows: toluene layer—all naphthols, all vats, all acetate, some dispersed metallized; water layer—all acid, basic, direct, soluble metallized, chrome, and some dispersed metallized.

Water Layer

E—Chrome	F—Soluble Metallized	G—Direct	H—Basic	I—Acid
cc of original nylon reagent extract, add 8 cc 0 cc ligroin; shake, then add ligroin in ½ cc becomes turbid and separates in layers. Add solution is homogeneous again. Add ½ cc hould result, and a colored layer separate at be ½-1½ cc; if not, readjust ligroin-tetrahydro-		Transfer contents to 60-cc separatory funnel. After separation into layers, draw off colored layer into test tube, add 3-5 cc water. Bring contents to boil and burn off escaping vapors. Keep boiling until steam appears. This solution is to be used for redyeing to separate dyes of the water layer.		
The ash contains chromium. These dyes bleed slowly and sparsely in nylon reagent, usually in a color different from the original dyeing. Redyeing on wool gives a color different from the original dyeing.	The ash contains chromium. These dyes bleed slowly and sparsely in nylon reagent, but the bleeding is the same color as the original dyeing. Redyeing on wool gives the same shade as the original dyeing.	Add 5-10 mg NaCl, drop of conc NH_4OH, and piece of white cotton to final extract from the ligroin test. Boil 1-2 min, cool. Redyeing of cotton to original shade is proof of presence of direct dyes.	Add 1-2 drops 10% acetic acid and 2-5-mg thread of tannin-mordanted cotton to final extract from ligroin test; boil. Basic dyes exhaust on the cotton.	Add 3-4 drops 10% acetic acid and 5-10 mg piece of wool to final extract from ligroin test; boil. Acid dyes exhaust in a shade comparable to the original dyeing.

Pour dye extract into 15-cc ng 10 cc toluene. Shake, add again. Let stand until two parated.

The dyes will be distributed into two layers: toluene layer—all acetates, some dispersed metallized; water layer—all basics, acids, chromes, some dispersed metallized.

Group II—Water Layer

	B—Metallized	E—Chrome
riginal dye-eavy metal, e been ex-	The ash of the original sample contains chromium, cobalt, or manganese. When cobalt is found, the original dyeing was made with metallized neutral dyeing acid dyes. When chromium is found, the two classes can be separated by testing for chrome by the procedure given under wool, sections "E" and "F."	

Dacron

Until recently, dispersed acetates were the only dyes used for Dacron. However, developed acetates (Cellitazols) are now being used for certain blacks, navies, and dark browns.

To distinguish between these two classes: Place 1½-2 gm resorcinol in 35-cc test tube; drop a 50-100-mg sample of the dyeing on top of the resorcinol, warm carefully to melt the resorcinol.

When resorcinol is liquid, dissolve sample. Avoid solidification of resorcinol at bottom of test tube; keep it spread along the sides of the tube.

Extract melt with 10-15 cc ether; filter.

When residue from filtration is white or very lightly colored, dispersed acetate dyes were used.

Winning paper in the AATCC intersectional contest

Effect of resins on light fastness of vat dyes

Piedmont Section Abstract

IT HAS long been recognized that resins can affect the light fastness of certain vat dyes. In the research reported in its prize-winning paper of 1956 (see TEXTILE INDUSTRIES for November, 1956, p. 100), the Piedmont Section found that of a group of thirty widely used vat dyes, fifteen were adversely affected by both dimethylol ethylene urea and an unmethylated melamine resin. The effect was attributed to the —NCH_2OH group found in the resins tested.

The research reported at the 1957 convention consisted of a review of the original work, and its extension to a broader range of dyestuffs.

The dyestuffs used were applied in a light shade (0.25%) by the pigment-pad-dry - chemical - pad-steam method of dyeing, to 80 x 80 print cloth. The dyed fabrics were then treated with dimethylol ethylene urea or methylated trimethylol melamine under a variety of experimental conditions. The effect of the resins on the light fastness of the dyes is given in the accompanying table.

A PRACTICAL RESULT of the research is the finding that a free radical and peroxide inhibitor, diallyl phthalate, is effective in controlling the fading in the presence of the resin. The use of such an inhibitor is based on the assumption that hydrogen peroxide developed by the dyes causes the generation of free radicals from the resins, which in turn causes an irreversible reduction of the dyestuff.

Diallyl phthalate is not considered to be the answer for use in the mill, however, since it is not effective at low concentrations. Further study is proposed, to find an inhibitor which is practical for mill use.

Other findings of the study included a determination that the effect of resins on light fastness is only dependent on resin concentration up to some point between one and five per cent, depending on the particular dye. Above five per cent, no further increase in fading occurs with increasing resin concentration.

It was also confirmed, as reported last year, that curing is not necessary to produce the effect, that a catalyst need not be present, and that the catalyst causes no increase in the fading.

Effect of Resin Treatment on Light Fastness of Representative Vat Dyes

Dyestuff	Colour Index or Prototype No.	Effect of Resin[1]
Anthraquinone Vat Yellow GC	Pr 9	0[2]
Anthraquinone Vat Yellow 3R	Pr 452	*
Anthraquinone Vat Yellow 5GLL	——	***
Anthraquinone Vat Fast Yellow Paste	——	***
Anthraquinone Vat Golden Orange RRT	CI 1098	+
Anthraquinone Vat Brilliant Orange RK	Pr 116	0
Anthraquinone Vat Golden Orange 3G	Pr 290	**
Anthraquinone Vat Red FG	——	*
Anthraquinone Vat Red FBB	Pr 296	***
Anthraquinone Vat Scarlet R	Pr 449	+
Thioindigoid Vat Pink FF	Pr 109	0
Anthraquinone Vat Brown R	CI 1151	*
Anthraquinone Vat Brown VR	——	*
Anthraquinone Vat Brown BR	Pr 118	*
Anthraquinone Vat Rubine R	Pr 124	0
Anthraquinone Vat Red Brown 5RF	Pr 448	*
Anthraquinone Vat Blue BCS	CI 1113	0
Anthraquinone Vat Blue GCD	CI 1112	0
Thioindigoid Vat Blue GR	CI 969	0
Anthraquinone Vat Dark Blue BR (BO)	CI 1099	0
Anthraquinone Vat Navy Blue RA	CI 1100	+
Anthraquinone Vat Navy Blue B	——	0
Anthraquinone Vat Brilliant Violet 3B	Pr 283	0
Anthraquinone Vat Brilliant Violet 4R	CI 1104	*
Anthraquinone Vat Violet VN (FFB)	CI 1163	*
Anthraquinone Vat Violet RK (AR)	CI 1135	*
Anthraquinone Vat Khaki 2G	Pr 122	0
Anthraquinone Vat Jade Green Supra	CI 1011	*
Anthraquinone Vat Olive Green B	Pr 293	0
Anthraquinone Vat Olive R	CI 1150	*
Anthraquinone Vat Olive T	Pr 547	0
Anthraquinone Vat Gray R	——	0
Anthraquinone Vat Gray 2G	——	0
Anthraquinone Vat Direct Black 3G	——	0
Anthraquinone Vat Direct Black RB	Pr 289	*
Anthraquinone Vat Black B (Chlorinated)	CI 1102	0

[1]Legend:
0—No effect
+—Improvement
*—Slight loss
**—Appreciable loss
***—Bad loss

[2]Brief recheck indicates slight sensitivity

Effect of laundering

(from page 100)

ly and after home laundering can be attained with dimethylol ethylene urea on cotton.

2—A neutralizing wash after curing is essential for the best resistance to chlorine damage, especially after laundering.

3—The optimum resistance to chlorine damage is obtained with zinc nitrate catalyst when curing 1 minute at 325 to 375 F, followed by a neutralizing wash.

4—Magnesium chloride catalyst is inferior to zinc nitrate but superior to the alkylol amine hydrochloride for producing resistance to chlorine retention damage.

5—The attainment of a durable crease resistant finish is not a problem (see Fig. 1).

6—The discoloration of white fabric is least with magnesium chloride, greatest with zinc nitrate, and intermediate with the alkylol amine hydrochloride (see Fig. 2). The whiteness retention with zinc nitrate is best at the lower curing temperatures.

Activated hydrogen peroxide bleaching process

by W. R. Steele
and S. M. Rogers

Solvay Process Division,
Allied Chemical & Dye Corp.

Abstract

IN BLEACHING with sodium hypochlorite, cloth usually has to be purified to a greater extent than with peroxide. While about equal whiteness can be obtained, the color tendency is considered poorer by many and some textile experts contend that reversion is greater.

Certain dyestuffs stand hypochlorite better than peroxide; others have to be bleached with peroxide. An antichlor usually has to be used after hypochlorite bleaching. In the case of continuous hypochlorite bleaching, costs are slightly higher for equipment and labor, but lower for chemicals and steam.

At the present time approximately 80% of all cotton textiles are bleached with peroxide. In peroxide bleaching, a considerable portion of the hydrogen peroxide introduced into a given bleaching operation goes down the sewer. Hydrogen peroxide bleaching is expensive and in many cases this cost is not really justifiable.

Silica complexes, from the silicate used for stabilization, form and precipitate on both the cotton and the equipment. Highly purified water, such as filtered softened water, quite often has to be employed for post-bleaching washing, to minimize pickup and retention of hardness salt complexes, which decrease absorbency, promote nonuniform dyeing, and cause localized fiber degradation.

TABLE 1

Bleach	Chemicals Reduced	Whiteness At Once	Whiteness After 23 Wks.	Whiteness Reduction	Absorbency	Fluidity	% Ash
Regular	None	86.8	85.0	1.8	28.9	5.45	0.17
Solvay	⅓	88.5	88.2	0.3	40.1	3.05	0.13

Hypochlorite-Peroxide Bleaching. Convinced that none of the present bleaching compounds is ideal, Solvay directed attention to employing bleaching agents in combination.

Usage of hypochlorite in conjunction with peroxide proved to be promising from the very first. Consequently, optimum sodium hypochlorite bleaching conditions were established, e.g., type and concentration of sodium hypochlorite, pH, bleaching time and temperature, and maximum possible reduction of peroxide and additives.

It was found that if immediately before peroxide bleaching the cloth is saturated for about one minute with one gram per liter of sodium hypochlorite (prepared by chlorinating caustic soda), squeezed to about 100% wet-out, allowed to stand 10-20 minutes at room temperature, and then *without washing* treated with peroxide plus additives, the peroxide and additive demand can be reduced greatly and the quality of the cloth improved significantly.

One mill bleached 20,000 yards of 80 x 80 4.00 cloth, using a caustic-type hypochlorite, compared with a regular peroxide bleach. The results are shown in Table 1.

Solvay Process. The distinctive step of the Solvay Activated Hydrogen Peroxide Bleaching Process is a short prebleach just before treatment with the peroxide. During a one-minute interval, the cotton is saturated at room temperature with its own weight of sodium hypochlorite (prepared by chlorinating caustic soda) of sufficient concentration to add to the cloth, air dry basis, about 0.10% sodium hypochlorite. Depending upon such factors as cotton absorbency and efficiency of saturation, the concentration of the hypochlorite may vary from 1 to 4 grams per liter.

When the cloth thus treated contacts the peroxide solution, all of the residual hypochlorite is decomposed immediately by an equivalent quantity of hydrogen peroxide. The released oxygen is believed to be consumed in useful

bleaching and the remaining hydrogen peroxide completes the work.

Since a considerable increase in whiteness is produced by the hypochlorite, much less peroxide and additives are required than in a regular peroxide bleach. Generally the peroxide and additives can be reduced 50%, but in one case the reduction amounted to 87%.

The additives can be reduced somewhat more than the peroxide because unused sodium hydroxide in the hypochlorite carries over and is available for further use, whereas a small quantity of the peroxide is consumed by reaction with the residual hypochlorite.

Mill Application. Cotton yarn and cloth (both woven and knitted) have been bleached commercially by the Activated Hydrogen Peroxide Bleaching Process. Some examples of commercial processing are as follows:

In the case of woven cloth bleached by the continuous saturator-J-box peroxide process, the hypochlorite step follows the washing after caustic soda J-boxing, and precedes saturation with peroxide plus additives. Extra equipment includes a saturator and a J-box of sufficient size to provide the 10-20 minute contact time at room temperature.

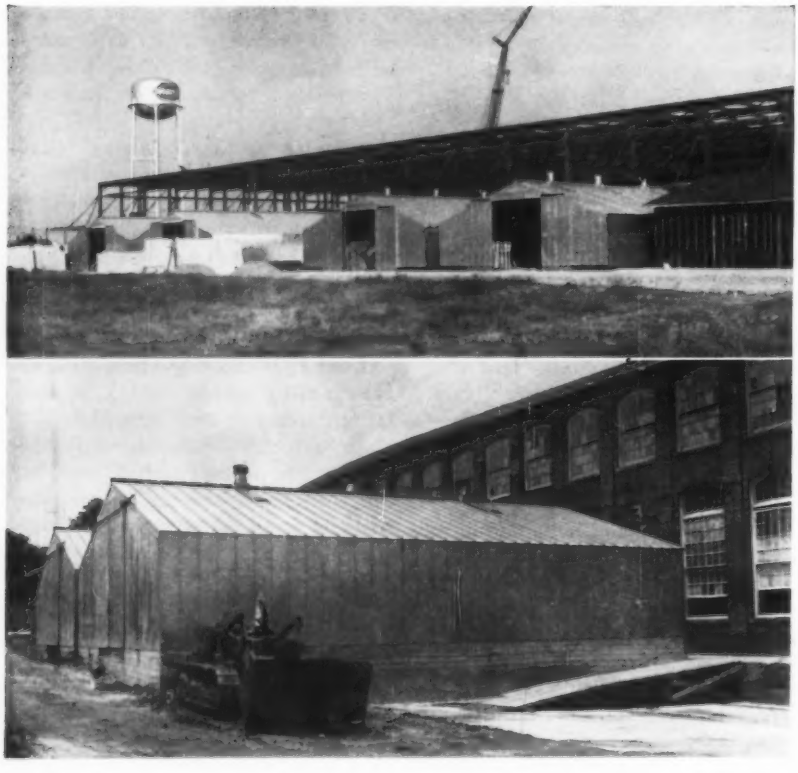
A saturator made of concrete and equipped with rubber squeeze rolls and a wooden J-box with a polyethylene sheet lining have proved to be satisfactory and economical; however, those fabricated of other resistant materials can be employed if desired.

In batch kier procedures, where the cloth is washed outside the kier and reloaded into the same or another kier, the hypochlorite step follows washing after kiering and precedes reloading. At this point the cloth is saturated with the required quantity of hypochlorite and put through a small J-box at room temperature prior to repiling mechanically with the peroxide liquor in the kier.

When the cloth is processed entirely in the same kier (i.e., not turned over), following the caustic boil and washing, hypochlorite liquor at room temperature carrying the required quantity of available chlorine is introduced. This is circulated for 10-20 minutes and then drained out. The peroxide liquor (with chemical components suitably reduced) is then introduced and the bleaching continued in the regular manner. The kier, pipe lines, and pump should be resistant, or made resistant to hypochlorite; for example, by painting with a mixture of cement plus sodium silicate.

(Other AATCC abstracts will be in the February issue.)

Utility buildings saved for another day



■ USUAL practice of destroying temporary storage and field office buildings after a plant is erected was reversed at the new Carlisle, S. C., finishing plant of Cone Mills Corporation.

While the plant was being constructed, machinery scheduled for installation was arriving at the site. To protect it from the weather, four special utility buildings were quickly erected.

After serving their purpose, two of the steel-paneled buildings were easily dismantled and shipped 150 miles to the corporation's White Oak plant at Greensboro, N. C., to serve as storage buildings. The remaining two steel structures were sent to another plant at Greenville, S. C., for the same purpose.

The prefabricated buildings were purchased from Armco Drainage & Metal Products, Inc.

The four steel storage buildings are seen in the foreground of top photo which was made when the Carlisle finishing plant was under construction. Bottom photo: Here are two of the steel buildings after having been moved to the White Oak plant from Carlisle. They now serve again as storage structures.

Consider the methods described by this mill man to

assure accurate roll settings

by Maley Chagro
Exclusive

IT is erroneous to believe that staple length alone is the chief factor in the determination of proper roll settings. True, it is a controlling factor, and many mills on the same grade stock, character and staple, year in and year out allow the staple length to assume such importance in roll settings when changing frames from one staple length to another.

But original settings must be based on other important factors besides staple length. No mill can afford to overlook these factors in the never-ending quest for quality.

The character of the stock, mass or bulk being drafted at various drafting sources and, no less important, the amount of drafting already completed as the stock advances toward the final drafting processes are all-important factors to be considered in roll setting.

The installation of long draft apron systems, condensers, and the use of sliver spread controls—in addition to the above mentioned factors — all add up to the fact that standard roll settings are chiefly an individual mill problem today.

However, there are many rule-of-thumb policies and guides (in textile texts) that can be followed until individual standards are set.

The methods employed by one large northern mill in the control of all roll settings have reduced practically all possibility of error in such settings to an absolute minimum. All settings, present and previous, including bottom roll diameters, are duly recorded and kept strictly up-to-date. Two of the methods are so simple and practical that other mills wishing to adopt them not only should benefit by them, but will find that the cost is negligible.

One method, the split bottom roll diameter recorded diagrams, eliminates any guess-work or trust to memory alone as to what the settings between the rolls actually should be. Once the distances between "bite to bite" are determined, the fixer, under the direction of the secondhand who checks all results, simply inserts the proper gauge between the rolls, the distances of which are determined by the recorded split roll diameters (see illustration below).

The form depicts only split roll diameters; the distances between rolls are entered by the secondhand, who in turn gives the copy to the fixer. When the roll settings are completed, the secondhand checks the settings and the record is filed for permanent reference.

The actual setting (see illustration) "bite to bite" between the first and second drawing rolls is staple plus 5/16". The staple length of 1⅛" plus 5/16" equals 1 7/16", the "bite to bite" roll settings of these two rolls. As a common denominator will have to be used, the 1 7/16" is converted to 23/16".

The split roll diameters of the first and second rolls total 9/8" or 18/16". This leaves a distance of 5/16" to be gauged between the rolls, and is so entered. The gauges should lightly touch both roll bosses and no force or pressure should be used.

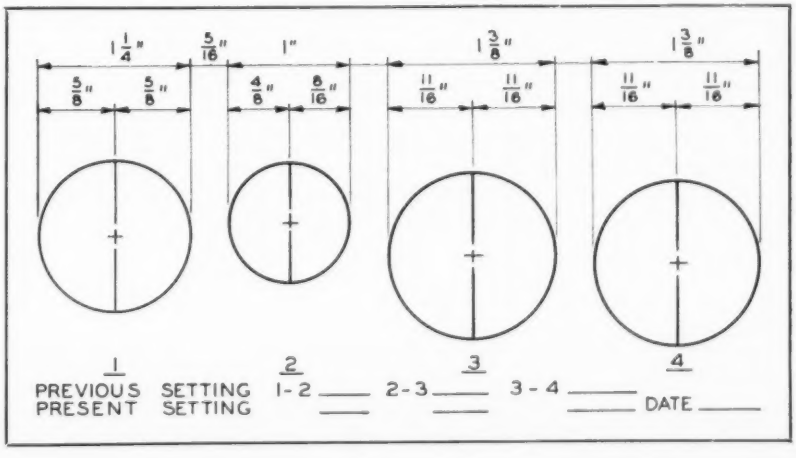
The FS-2 and J-3 frames are both converted slubbers. The FS-2 has both apron and condenser control with condenser control at the front roll, while the J-3 has condenser control between the second and third rolls, with fixed settings between them.

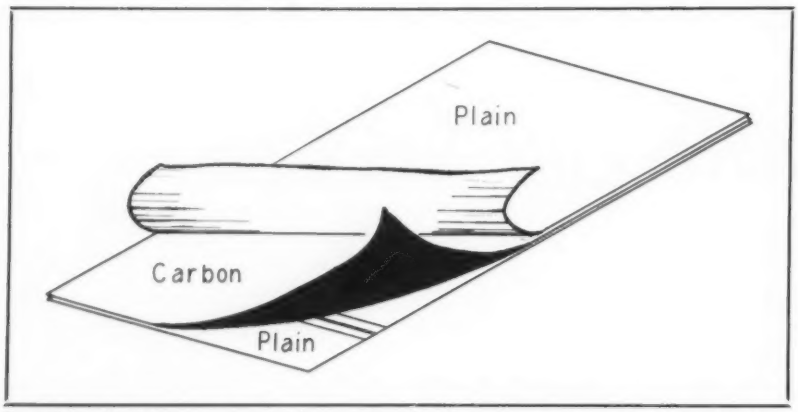
Both condensers serve the same purpose: to condense the fibers as they are drawn and prevent undue spread and resultant uneven yarn. These safeguards, or controls, are highly desirable (the yarns in this mill are almost consistently grade A or B plus).

On the second intermediate roving frames, with lower total drafts, and with the stock greatly reduced as to mass and bulk, the settings were found to produce an even roving strand.

The use of light plastic sliver spread controls has gained much

This form is representative of the ones used for recording the various roll settings in both carding and spinning. The form for the appropriate rolls is issued to the fixer by the secondhand, who enters the figure indicating the spacing between the rolls (note the 5/16" entered between the first and second rolls) necessary to meet the new drafting conditions. The fixer uses a simple thickness gauge between the rolls.





Two slips of plain paper sandwich a piece of carbon paper. The sandwich is placed on top of the steel rolls, the top rolls put in place, weighted, and struck smartly with the hand. The resulting pressure causes the roll flutes to impress the carbon onto the plain paper. The impressions, which mark the roll settings, are kept as a permanent record.

favor; they are used at the front and back rolls of the drawing frames and the back rolls of the converted slubbers. The light plastic control rests on the sliver (which does not sag), the sliver passing through an opening similar to a wide-toothed comb. They are comparatively inexpensive and add up to quality control in the prevention of sliver spread.

The gauges should be a series of metal plates of different thicknesses (usually 1/32", 1/16", ⅛").

The general practice in this mill is to set the second roll to the front roll, the third roll to the second, and, where there is a fourth roll, it is set to the third roll. For accurate results, loosen slightly every middle and back roll bearing (roll stand).

Starting at the head end of the frame (that is, the opposite end away from the pulley end), place the gauge between the bosses of the front and middle rolls, nearest *every other roll stand*, and tighten the bearings in position. This reduces the chance of springing the rolls.

Then gauge the rolls at all other bearings and tighten them. Care should be exercised that this operation does not shift the position of the rolls. Wherever feasible turn the rolls by hand to check for possible "binding."

The top rolls, of course, cannot be set until the setting of the steel rolls is completed. Top rolls, both common and metallic, and bottom rolls, should be carefully inspected, and any imperfection corrected before settings are fully completed.

The general policy on the slubbers and second intermediates is to set the top rolls slightly "forward." This serves a dual purpose: The bite of the rolls is brought slightly forward and receives the full thrust of the bottom rolls and, in the case of the top front rolls, the end is delivered nearer to a line to the tops of the flyers.

To avoid confusion as to what is actually meant by "bite to bite" of rolls in relation to settings, it means the exact center of the "bite" in this mill. The mass or bulk being processed will determine the width of the "bite" and all measurements are calculated from the center of the widths.

This central point for calculating the setting is important because the width of the "bite" is wider at the back rolls of the drawing frames than at the back rolls of the second intermediate roving frames, and all pre-determined settings are so based. All new settings are thoroughly pre-tested before approved.

It formerly was not unusual to see a fixer use a ruler to measure from the center of the arbors of top rolls to ascertain the settings. The liability of error here is apparent. Because of the position of the top rolls it is difficult to get a correct "center" measurement, and some guess-work enters into the liability of error.

To offset this the mill makes "impress" measurements, using carbon paper for such recordings. These recordings are entered into a permanent reference file, and all settings are checked in this way at least once per month.

The carbon inserts and paper should be of sufficient length to clear visibly the outside edge of the bosses. A small paper clip will hold the insert and paper in position. Remove the top rolls of the settings to be checked and lay the paper across the bottom rolls. Replace one top roll and with the fingers, lightly pull the papers taut before replacing the second top roll. Replace weights.

Sharply strike both top rolls with the heel of the hand, and the carbon recording will be impressed on the bottom paper. Measure from center of "bite to bite" for exact measurements. A little practice is all that is necessary to set up this recording and practically fool-proof procedure.

Many textile machine manufacturers of long draft spinning systems, pre-determine the roll settings before installation. In this plant there are two types of the Casablanca system in the spinning room; one known as the "staple G cradle" type and successfully drafts staples up to 1½". The other, known as the "worsted B cradle" type successfully drafts staples up to two inches, and is applicable and effective for blends, cut rayon staple and cut wool, not exceeding 2 inches. Thus any changes (staple) on these systems, not exceeding their pre-determined limits, does not change already pre-determined roll settings. The "nip" of the apron is set close to the front roll, thus narrowing the "free zone" between the "nip" of the apron and the bite of the front rolls.

Generally, on nearly all types of drafting systems, rolls are set far enough apart to clear the staple lengths. That is, the two pairs of rolls do not grip or hold the staple at the same time. When they are too close together the longer fibers may break and thus weaken the yarn. Conversely, if the rolls are too far apart, the spread, or splay of the fibers, will result in an uneven strand.

In the apron-to-apron system, such as the Casablanca, or any system that has apron-to-apron

control of fiber splay, planned inspections should be made for apron stretch aside from normal wear. Once the aprons begin to show signs of abnormal stretch, the retardation value, or control value of the aprons begins to lessen.

Top rolls in this plant are inspected twice weekly, at the same time the aprons are inspected, for position and condition. Aprons that are beginning to "bulge" up inside the cradles and rotate loosely around the pins of the cradles, are aprons ready to be discarded.

The whole frame should be changed and records of such changing should be filed for permanent reference. Yarns should always be tested just prior to and after apron changing. These changings are incorporated into regular scouring schedules.

Roll setting and control of fibers within the drafting zones remains one of the most important functions in the mill, and the quality of the yarns and cloth will reflect the accuracy of such settings and controls.

Tips for dyeing stretch nylon hose and nylon-cotton fabrics

■ PROCEDURES for dyeing stretchable yarns and knitted fabrics containing 100 per cent nylon and blends of nylon and cotton are contained in Bulletin N-97 recently published by the Textile Fibers Department of the Du Pont Co.

Following are several suggestions for carrying out these operations, as abstracted from the bulletin:

1. Handle yarns and fabrics in a relaxed condition to prevent loss of stretch.

2. Use normal dyeing procedures, but select dyes that have satisfactory fastness to boarding or heat-setting if these operations are carried out after dyeing.

3. Condition knit goods made of all-nylon stretch yarns in a relaxed state to allow the yarn crimp to develop fully and uniformly. This relaxation is slow when the yarn is dry. Steam fabrics (except those made of "Ban-Lon" and "Agilon") lightly for 5 to 10 minutes.

If goods are dirty, scour with 1 per cent "Duponol" RA surface active agent and 1 per cent tetrasodium pyrophosphate at 120 to 180 F for 30 to 60 minutes. Then rinse, extract, and dry without tension.

For "Ban-Lon" fabrics, scour at 80 F for 10 to 15 minutes, using the same materials recommended above. Then rinse, dye, extract, and dry in tumbler type dryer at 160 to 180 F. Normally, these fabrics are not preboarded but are given final boarding at conventional temperatures.

To develop crimp of Agilon fabrics, loosely place goods in bags and put them in a rotary or paddle type machine containing cold water and a detergent. Start machine and slowly raise bath temperature to 160 to 180 F over a period of 15 minutes and then hold at this temperature for an additional 5 minutes.

4. With nylon stretch hosiery it is important to keep preboarding temperatures uniform. It can be preboarded with steam at 235 to 250 F for 3 to 5 minutes. In some mills exposure at 220 F for 1½ minutes is being used.

5. Be careful when selecting dyes and dyeing techniques. Use disperse dyes for light shades. For medium to dark shades use neutral dyeing acid or "Capracyl" dyes. Use chrome dyes for maximum washfastness, but only if the stretch yarns dye uniformly.

a. To retain maximum yarn elasticity, keep dyeing temperatures below 180 to 190 F. With heat-set goods, temperatures of 200 to 212 F may be used with satisfactory results. Leveling salt dyeing assistant (about 0.5 per cent) promotes levelness and reduces barré in stretch nylon materials.

6. Softness and elasticity of stretch yarn fabrics are improved by treatment with compounds such as "Avitex" NA or "Avitex" ML softeners.

7. Use the smallest possible forms in final boarding so that goods will have maximum stretch properties.

8. For nylon-cotton knit goods that contain 50 per cent or more of stretch nylon, condition, scour, and dye like an all-nylon fabric. Relaxation and minimum temperatures during dyeing and finishing are necessary for the production of fabrics with maximum stretch and dimensional stability. If bleaching is required, either "Textone" or "Albone" 35 hydrogen peroxide can be used.

9. Nylon - cotton blends can be dyed in several ways, depending on the fastness requirements:

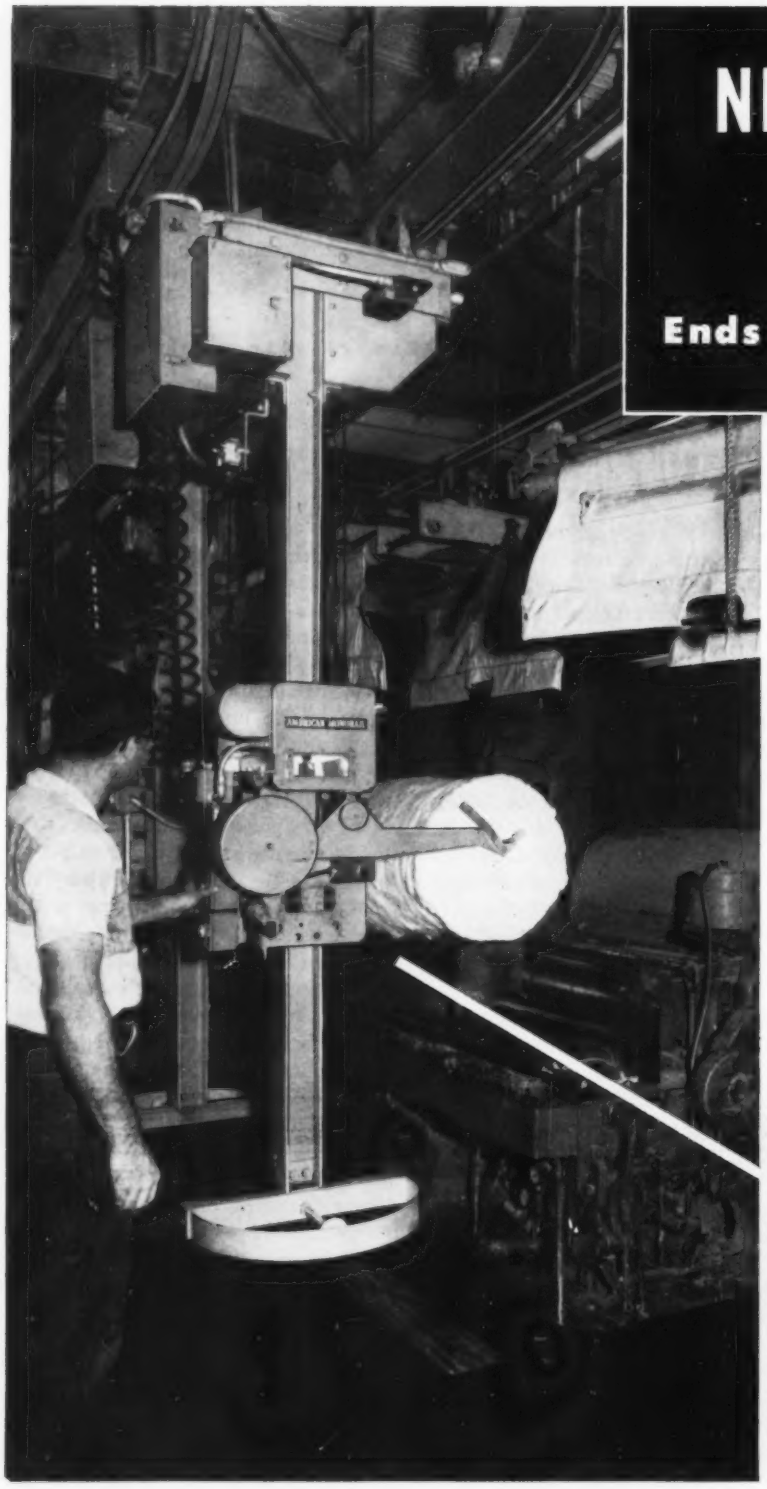
a. For maximum fastness, the cotton should be vat dyed in yarn form and nylon dyed either in yarn form or after knitting with selected acid or "Capracyl" dyes.

b. Dye nylon-cotton hosiery by conventional vat dyeing techniques. On some shades, however, it may be necessary to fill in the nylon with selected acid or "Capracyl" dyes in a second bath.

c. Satisfactory washfastness is obtained when nylon is dyed with acid dyes and cotton with selected direct dyes in a one-bath, two-step procedure. If washfastness is not of primary importance, a one-bath, one-step method can be used, in which disperse dyes are applied to nylon and direct dyes to cotton.

10. For better softness and improved draping properties such materials as "Avitex" NA softener are used on stretchable nylon and cotton.

11. In final finishing of nylon-cotton fabrics, permit them to relax completely if maximum stretch properties are desired in the finished goods. Use smallest forms for final boarding of hosiery. Dry and calender knit fabrics under minimum tensions. Spread them only enough to remove wrinkles and creases.



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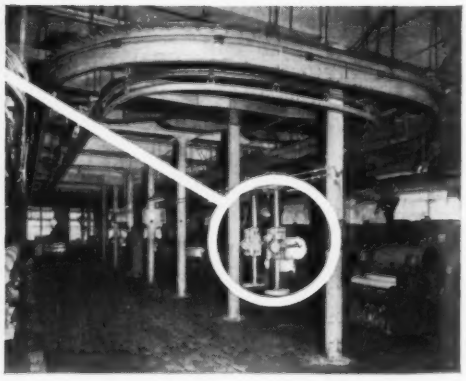

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Yarn quality is suffering

because of gin damage to cotton, Aldrich tells Eastern Carolina mill men

Staff report

COTTON'S latest scourge is the pulverized coating of the cotton seed, A. P. Aldrich, Jr., told the Eastern Carolina Division of the Southern Textile Association, which met recently at N. C. State College, Raleigh, N. C.

Cotton is mechanized, and this accounts for the added trash, Mr. Aldrich said. All of the lint is picked together instead of in two separate harvests as it was done when picked by hand. Sometimes as high as 4000 pounds of stock is put through the gin to get 500 pounds of cotton, he continued.

Ginners attempt to clean the cotton after ginning, and this is the source of many present troubles with cotton.

Present gins grind trash to such fineness that it doesn't appear obvious in the cotton, and the cotton is graded higher.

Another scourge is high-temperature drying to handle mechanically picked cotton. This overdrying ruins the cotton and affects dyeing operations, he concluded.

Jesse Boyce, Erwin Mills, Durham, N. C., served as moderator for a panel discussion of mill problems and practices. One mill man wanted to know if there is a need for new work methods on new machinery. The panel answered "yes" to the question. Along with new machinery developments new work methods must be adopted. For example, on new large package roving, new work methods should begin at doffing where package size may be 12″ x 7″. In this connection, a mill man wanted to know the limits on large package roving. The answer lies in how much women can lift all day to creel, a panel member replied.

Another member of the group asked if block creeling had been tried by any of those present. It was reported that some mills let all roving run out before putting any on the frame.

The lightest practical roving to run on 12″ x 7″ frames at present appears to be about 1.35-1.40 hk, and a high twist multiplier of about 1.26-1.30 is necessary to prevent stretching, a panelist told a mill man in answer to a query.

A. P. Aldrich, Jr., Aldrich Machine Works, discussed the current difficulties with cotton, attributed to poor harvesting, ginning, and classing methods.

"Is there a limit on can sizes?" one man asked. Some mills now use 18″ x 42″ cans on cards

Members of the discussion panel, l-r: Joe Hughes, Cone Mills; Lewis Burgiss, Crompton & Knowles Loom Works; M. R. Harden, Saco-Lowell Shops; J. P. Martin, Pilot Mills; Joe Gilbert, Hart Cotton Mills; Gilbert Mays, Erwin Mills; and Robert Dalton, Whitin Machine Works.

ND FACTS

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- New Departure adapter ball bearings are sealed and lubricated for life.
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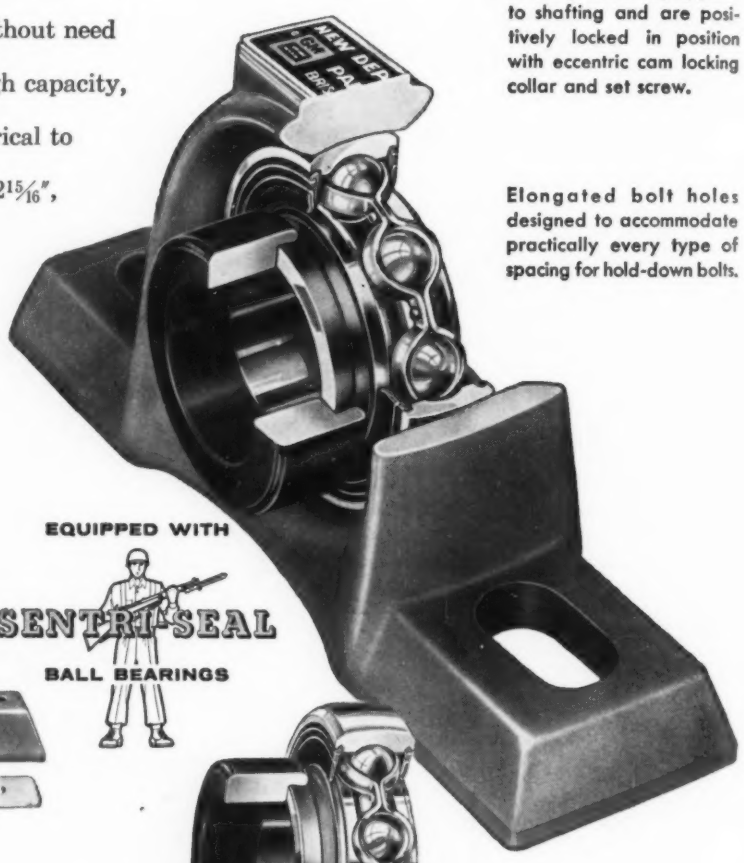
- Pillow blocks are easily mounted without need for any special tools.
- New Departure ball bearings are high capacity, precision-built for long life.
- Bearing and block surfaces are spherical to accommodate any misalignment.
- Thirty-two shaft sizes, $\frac{1}{2}$" through $2\frac{15}{16}$", for wide variety of applications.
- Interchangeable with most other makes of pillow blocks.

Bearings are easily applied to shafting and are positively locked in position with eccentric cam locking collar and set screw.

Elongated bolt holes designed to accommodate practically every type of spacing for hold-down bolts.



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and 16" x 42" cans on drawing, and there is no known limitation at present, it was revealed.

One man reported trouble with coil springs in cans. He said the fiber gets crimped at the side of the can and breaks back. No one else reported this difficulty.

In discussing coated rings, one mill's experience indicated that the rings were installed on two frames and travelers were started at over 6000 fpm. These were changed after two hours, and again after 20 hours. Some burning was evident. The change interval was extended to eight days and then to the present interval of two weeks. The rings are doing a good job and giving very little trouble with burning, according to the speaker. This mill also reported having some mirror-finish rings on which the travelers are changed once each week.

Raleigh Daniels, Pilot Mills, Raleigh, N. C., was elected to serve on the executive committee for the group.

Jesse Boyce, Erwin Mills, Durham, N. C., was moderator of the discussion panel.

New process for union dyeing of Acrilan-wool blends

■ A NEW PROCESS for the dyeing of Acrilan acrylic fiber and wool blends within dyeing times commercially acceptable for wool was announced at a recent meeting of the New York Section of the AATCC by Walter H. Hindle of the Chemstrand Corp. The technique, named "Chem-acril," bridges a time differential caused by the faster dyeing rate of wool.

According to Mr. Hindle, the new process involves addition of cationic and non-ionic materials to the dyebath without pretreatments. These commercially available materials, in conjunction with sulfuric acid and dyestuffs selected from all types of wool dyestuffs, yield union shades within dyeing times commercially acceptable for wool.

The cationic material, which is also called Chem-acril, has several functions, Mr. Hindle pointed out:

1. It slows down the dyeing rate of wool under conditions of pH suitable to Acrilan, to a rate closely similar to that of Acrilan.

2. It promotes a transfer or leveling between Acrilan and wool.

3. It reduces the quantity of acid previously needed to affect unions.

Also, tests show that a sulfuric acid - time relationship exists in which, within certain bounds, a reduced amount of sulfuric acid can be compensated for by longer time and vice versa.

The examination and evaluation of a large number of dyestuffs reveals that the quantities of sulfuric acid to be used vary with the dyestuff type, according to Mr. Hindle.

In commercial practice, he said, the prepared goods are circulated at 140 F in 0.75% Chem-acril, 1.5% Triton X-67, the requisite amount of dyestuffs, and the sulfuric acid appropriate to the dyestuff type. The temperature is raised to the boil over 45 minutes and dyeing is carried out for one hour. Additions of dyestuff for shading purposes are made by reducing the temperature of the dyebath to 190 F. Sulfuric acid addition may be safely used to promote transfer from wool to Acrilan if the union is not complete within the prescribed dyeing time.

A full shade range is available for both men's and women's wear with the wetfastness of the Acrilan component showing superiority over that of the wool.

Several hundred pieces have been dyed by the method, Mr. Hindle reported, with every indication that the theoretical findings have been reduced to regular commercial practice.

News in Brief

Japanese Textile Policies. Welfare and gold were given as the aims of the Japanese cotton industry by Kojiro Abe, chairman of the All-Japan Cotton Spinners' Association, speaking at a recent meeting in Venice, Italy. "We aspire to [supply more clothes to Japan's 90,000,000 people and contribute to greater consumption of cotton by overseas customers] not only because we, as textile manufacturers, are eager to serve the cause of uplifting the welfare of consumers in wide areas of the world, but also because we want to fulfill the role our industry has to assume under present economic conditions of the country by earning gold, which is constantly short in Japan," he said.

Patent Examiner Positions. The U. S. Civil Service Commission has announced an examination for filling Patent Examiner positions located principally in Washington, D. C., including openings in the fields of textile engineering and textile manufacturing. Salaries range from $4,480 to $12,900 per annum. Details and application forms may be obtained at many post offices, or from the U. S. Civil Service Commission, Washington 25, D. C.

PTI Reaches Goal. The textile and allied interests have oversubscribed the $200,000 goal set by Philadelphia Textile Institute in its drive to obtain funds for a student union building. Application has now been made to the Federal College Housing and Home Finance Agency for a loan of $450,000 needed to complete the building.

*THE OLD BOSS DYER SAYS:

The effect of resins on individual dyestuffs can not be relied on to indicate what the effect will be when they are used in combination. Check each formulation you plan to use.

* MORTON MACHINE WORKS, INC., brings you the Old Boss Dyer with a timely tip on dyeing each month.

MORTON also brings you the finest line of dyeing, bleaching and drying equipment available today—THE MORTON SYSTEM.

There's a MORTON SYSTEM installation near you . . . and our best selling point is a trip through a mill presently using MORTON equipment.

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MORTON MACHINE WORKS, Inc.

COLUMBUS, GEORGIA, U. S. A.

Manufacturers of the MORTON SYSTEM Machinery for Dyeing and Bleaching of:
BEAMS -:- PACKAGES -:- STOCK -:- PIECE -:- TOPS

VALVES — PUMPS — BEAM AND PACKAGE EXTRACTORS AND DRYERS — DYE BEAMS, ALL MAKES AND DESIGNS — DYE TUBES — DYE SPINDLES — TUBE SPACERS — STAINLESS STEEL DYE TUBES — CUSTOM BUILT TANKS TO CUSTOMER'S SPECIFICATIONS

Theme song of the labor monopolies

"You cut your prices while we raise your cost;

We'll take the profit while you pay what's lost."

by Ringgold Arden

Exclusive

LAST WINTER the president of the labor monopoly which controls all labor in the automobile industry announced that the voracious bites which his monopoly had been taking out of the bank rolls of automobile buyers for the past decade or so were mild and soothing nibbles compared to what his organization expected to do to the public in 1958 when new contracts had to be negotiated.

Recently, perhaps in order to temper the wind to the shorn lamb which is about to be shaved, this same gentleman magnanimously came forward with the "statesmanlike" suggestion that it would be very nice, in view of what he proposed to do to the public next year, if the automobile manufacturers would kindly reduce the prices of their cars this year. In return for such a reduction, he generously promised that their philanthropy would be "taken into consideration" when the big bite was applied in the contract negotiations next year. This was all in the same friendly spirit evidenced by the generous robber who offers to leave his victim carfare, or in a burst of real good feeling, gives him a dollar of his own money to soothe his shattered nerves at the nearest popskull parlor.

The automobile magnates, after giving this proposal what seemed to be an unnecessarily lengthy consideration, politely rejected it. Why it was necessary to take any time to reject such a crack-brained piece of gall as this was not quite clear.

WORKERS in the textile industry have a very keen personal interest in what the automobile workers have been doing and expect to do to the price of automobiles. Most of the people who work in the textile industry own automobiles, and probably all the rest of them would like to own cars if they didn't cost so much. Textile workers, along with farmers and other people who produce things, the prices of which are affected by world prices, are in no position to meet the free-wheeling inflation kept going by the big labor monopolies which completely control prices in whole industries.

The farmers have received a very good measure of paternalistic protection from the federal government by export bounties on their products and by fixed prices, at the expense of the general taxpayer, including workers in the textile industry. The textile workers have not been so favored, and very few responsible people in the textile industry would like to see it become a mendicant industry, dependent on the fickle winds of political favor. Workers in the textile industry and other industries sensitive to world prices should reasonably feel that their government ought to do something constructive to check the built-in inflation imposed upon the country by these labor monopolies.

We have read articles in responsible publications professing confusion as to a satisfactory explanation of this inflation which seems to keep going in defiance of all of the classical laws of inflation. The explanation of the constant price rises seems to be simple enough—the big labor monopolies just keep pushing up costs in the bellwether industries. If prices go up in basic industries like steel, automobiles, foodstuffs, and petroleum products, millions of affected persons demand that their wages be raised to meet the increased cost of living, and this sort of thing keeps going on so long as monopolies are permitted to get these knife-at-the-throat wage increases.

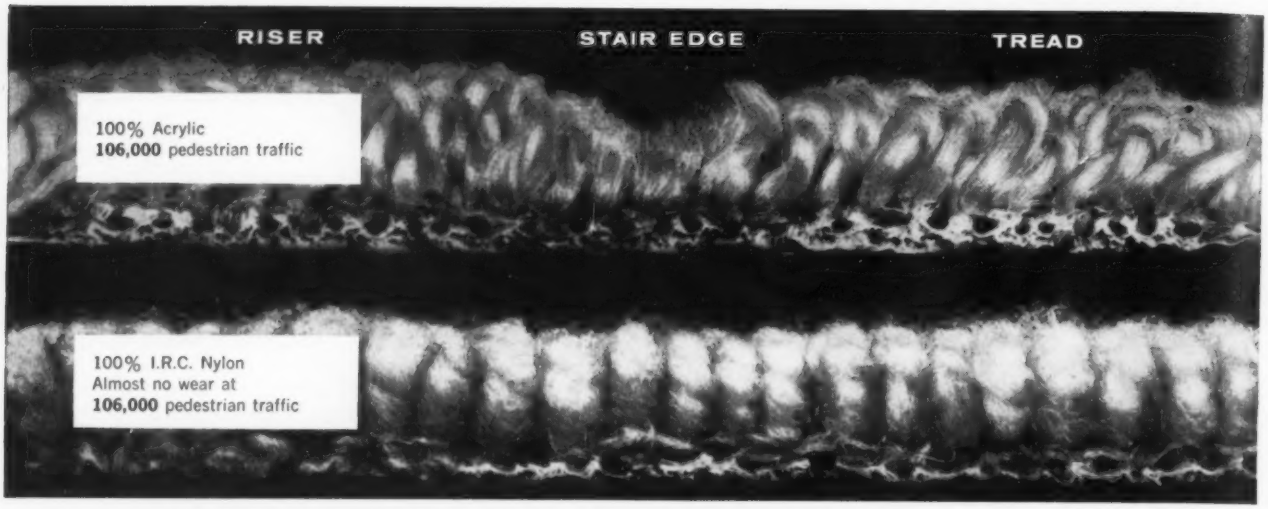
It has always seemed to us that any concern operating in an area where a labor monopoly controls wages makes a big mistake in not immediately raising prices, effective the day these gun-in-the-ribs wage increases become effective, and at the same time advertising to the public the exact reason for the price increase. The entire automobile industry must obviously increase prices when its monopoly controlled labor increases costs. An immediate price increase, concurrent with the wage increase, would make the public understand exactly what had happened. Delay in raising prices throws the weight of criticism on the concern which has raised them.

Not long ago the steel industry raised prices and was blistered with a lot of acid criticism for doing so. It seems to us that this price increase should have been made the day the last wage increase went into effect.

RELATIVELY FEW persons who are not experienced in business understand exactly how wages affect prices. Many sup-

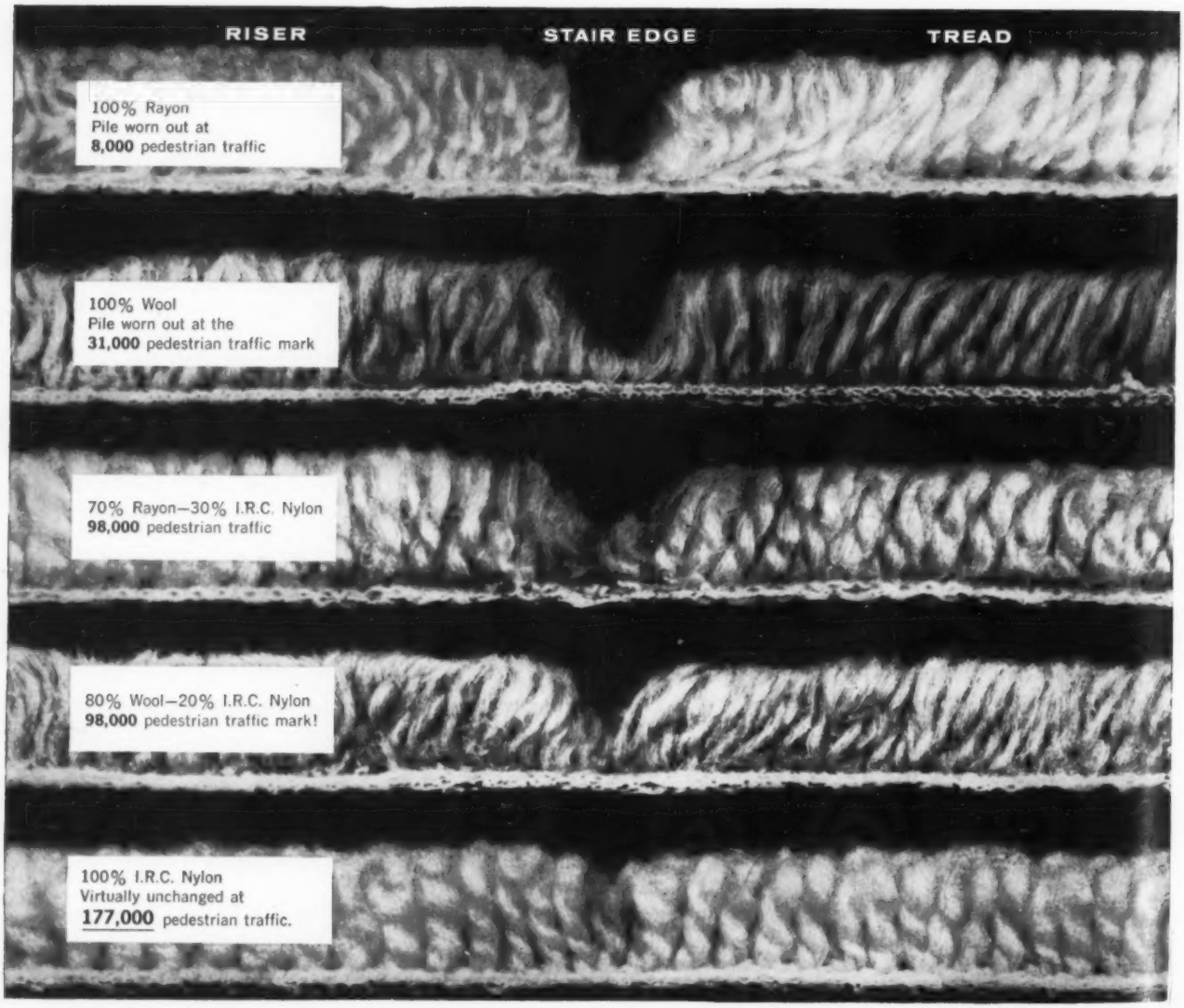
NYLON COMPARED WITH ACRYLIC CARPET FIBER

LOOP PILE CONSTRUCTION



NYLON COMPARED WITH RAYON AND WOOL

CUT PILE CONSTRUCTION



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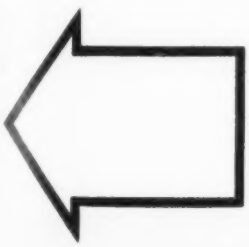
NYLON outwears them all!

"How does it wear?" That's one of the most important questions consumers ask. Permanent textures, recovery from crush, excellent resistance to matting, and great resiliency are other important performance characteristics consumers ask about. Nylon has them *all*, as proven in *actual wear tests!* The toughest possible traffic test proves... *no other fiber adds durability to floor covering like nylon!*

THE NEW Nylon Staple I·R·C

INDUSTRIAL RAYON CORPORATION, 500 Fifth Avenue, New York 36, New York · 627 Guilford Building, Greensboro, North Carolina



WEAR—Nylon outwears every other carpeting fiber known. In these tests identical, unpadded strips of carpeting were laid on bare, rough steps in an industrial plant. The strips shown in the unretouched photographs were rotated regularly. 100% rayon was removed after stair edge wore out—at only the 8000 pedestrian mark! The 100% wool was stopped at the 31,000 pedestrian mark. The test for the 70% rayon/30% nylon and 80% wool/20% nylon were stopped at 98,000 and for 100% nylon at 177,000. In the test of acrylic fiber with nylon, the photographs tell the story!

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5/16" Face Conical Ring. The most popular ring to produce light count yarns at high spindle speeds.

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For Medium Counts

3/8" Face Conical Ring for worsted, orlon, nylon, dacron and blended yarns of all types.

Two-arm, light, long aluminum base.

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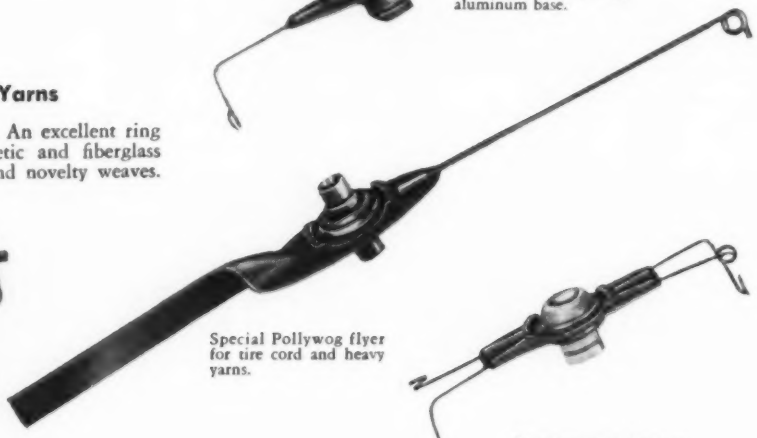
4 3/64" Face large diameter Conical Ring. An excellent ring for spinning and twisting wool, synthetic and fiberglass yarns for carpeting, tire cord, woolens and novelty weaves.



Special Pollywog flyer for tire cord and heavy yarns.

Four-arm long brass or aluminum base

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Better yarns at higher speeds are the rule with Herr Conical Rings and Herr Flyers. Clean, smooth yarns, heavier doffs, less yarn breakage, fewer knots. Designs of flyers and travelers have been worked out for handling synthetics and blends.

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FOR SPINNING AND TWISTING WORSTED, WOOLEN, RAYON, NYLON, ORLON, FIBERGLASS AND BLENDED YARNS OF ALL TYPES

posedly reputable economists seem to think that wages are only a part, and sometimes a small part, of the cost of producing goods. The truth of course is that the cost of almost anything is the cost of the labor of producing it, since untouched raw materials have practically no value, and the only thing that produces value is the application of somebody's labor to these raw materials now, or at some other time. In running a business, it must be remembered that one of these other times can be in the future, and the prudent manager must recognize that fact if he expects his company to remain solvent.

In the case of the steel industry, the president of one of the big companies pointed out not long ago that a blast furnace which cost about 12 million dollars 25 years ago had to be replaced this year at a cost of 60 million dollars. Therefore, when wages go up and it is perfectly obvious that the depreciation being charged off on existing equipment will only cover a trifle of the cost of replacement, any executive who cares anything about the future of his company must increase prices to accumulate the money necessary for equipment replacement in the future.

The socialists and other shallow thinkers violently oppose this practice of applying realistic depreciation rather than imaginary depreciation, and argue that the cost of replacing a worn-out machine, if this cost is four or five times what it used to be, should be taken care of by additional financing. This adds fuel to inflation.

There is no industry any more acutely conscious of what inflation has done to replacement prices than the textile industry. A cotton card which could be bought 50 years ago for $425, now costs around $4000. A spinning frame which cost $2.00 a spindle 50 years ago, now costs about $48 a spindle. It is of course impossible to depreciate a $2.00 spindle so as to replace it with a $48 spindle, and textile mills have had to try to buy the new equipment which they were obliged to purchase by paying for this out of recent earnings.

THE TEXTILE INDUSTRY, being not yet completely union-ridden, is still on a highly competitive basis, and it is therefore not always possible for a textile plant to raise prices after a labor union has forced higher costs upon it. It can always go out of business. In those industries like steel and automobiles and electrical apparatus, where one big labor monopoly controls wages and prices, nobody has to go out of business on account of a wage increase. This increase is simply passed on to the public, and if the public rebels and cuts down purchases, that is likely to affect all producers more or less uniformly.

This is what the big labor racketeers refer to as a stabilizing effect. They stabilize money out of the pockets of the general public into the pockets of the adherents of their rackets, and this certainly stabilizes conditions in the monopoly controlled industries. Any extortion racket is profitable to the people who run it, but not so beneficial to the victims who make the profit possible.

In a normal competitive economy, competition is supposed to regulate prices, and will do so within reasonable limits. No unit of a truly competitive industry can push prices up to any appreciable extent, but when competition is strangled and complete monopoly control exists, there is no limit to how high prices can go, except the willingness of purchasers to pay them. Where commodities like steel, automobiles, and electrical apparatus are concerned, the demand for such things is so insistent that people will pay truly exorbitant and unreasonable prices, because they have to have these things to stay in business.

The exorbitant and unreasonable wages that have to be paid to create such prices are a shining mark for all labor leaders to point to in trying to push up the wages for their people. In most of our big industries there is not the slightest vestige of competition where wages are concerned. The wages are determined by the people who run the labor monopolies, and not by the people who pay the wages or the people who get them. The people who get them are always delighted to accept a wage increase, but would just as cheerfully work for a good existing wage if there were no means at hand to force the employer to grant a higher one.

These knife-at-the-throat wage negotiations often lead to fantastic situations. Quite recently it was reported that 23 electricians working for the two St. Louis newspapers shut them down and threw all of their employees out of work because they alleged that they could no longer live on any such a pittance as $3.25 an hour, and since the other people who worked for these newspapers had labor rackets of their own to protect, they refused to cross the electrician's picket line, and these 23 people were therefore in a position to keep the newspapers shut down indefinitely, until their demands were met. The granting of unreasonable demands would encourage all of the employees of these papers to make demands of their own, and the cost of all of this is finally passed right on to the readers and advertisers.

Only a few days before this episode, a group of mailers numbering about 300 persons shut down all but one of the newspapers in Boston for nine or ten days. The newspapers had agreed to the wage demands of the mailers, which would seem a bit exorbitant, since these people are only semi-skilled workers and were making $94 a week and hungered for $102 for doing work which appeared to be mainly getting newspapers onto trucks. The big row was over the insistence of the newspapers for a two-year contract, and the demands of the union for the privilege of bringing the whole thing up and doing it over again in one year. The repercussions of this thing were most interesting.

The combined circulation of these newspapers was about 1,250,000 copies a day, and they circulated all over New England. Unable to get their favorite Boston papers, people all over New England began subscribing to local papers, and we noticed an advertisement in one of these papers in a city of about 80,000 population, stating that their circulation had increased by more than 30,000,

Smooth drafting action of Armstrong Accotex Aprons means top-quality yarn

On modern, high-draft frames, the right spinning apron can make a big difference in yarn quality. That's why mills everywhere have specified smooth-running Armstrong Accotex® Aprons for use on their equipment.

These aprons are precision-engineered to provide the smooth drafting action and good yarn control essential to high-quality spinning.

An important reason for this performance is the skilled compounding of the synthetic rubber compounds used in Accotex Aprons.

For example, on Accotex NO-7075 Aprons, the black outer surface is tough and abrasion-resistant. It has just the right surface friction to drive the top apron without slipping.

The white inner surface is smoother, yet it grips the drive roll firmly and moves over the pins without buckling or jamming. Special electrolytes added to this compound help to prevent accumulation of fibers on this inner surface.

The patented construction of Accotex Aprons also contributes to their outstanding performance. A strong, straight-line cord interliner eliminates stretching and curling while maintaining the flexibility needed for smooth operation.

Careful rubber compounding and patented construction . . . combined with modern production methods . . . help produce a top-quality apron, one that will deliver strong, uniform yarn for years.

There's an Armstrong Accotex Apron specially engineered to help you get maximum performance from your equipment. If you're not already using these aprons, ask your Armstrong man to arrange for a test next time he calls. Prove on your own frames what an important difference in yarn quality Accotex Aprons can make. Armstrong Cork Company, 6401 Ivy Street, Lancaster, Pa.

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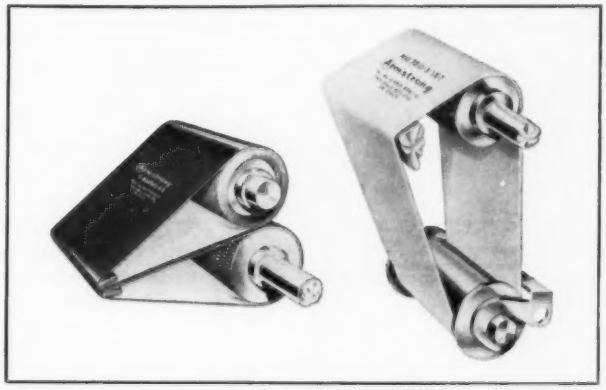
FOR DOUBLE-APRON SPINNING, use Accotex NO-7075 Aprons. Straight-line cord interliner assures non-stretch performance. For single-apron spinning, the NO-750 Apron gives the smooth drafting action needed for strong, uniform yarn.



presumably on account of this Boston newspaper strike.

This is doubtless a good thing temporarily for the local newspapers who have these new subscribers, but may result in bankruptcy for some Boston newspapers. Furthermore, the readers who have been accustomed to metropolitan newspapers will probably ultimately go back to subscribing to them, and the local papers which spent money to take care of this additional business, and possibly entered into contracts for newsprint which will not be needed, ultimately will lose money.

Everybody loses money when a little handful of irresponsible and rapacious racketeers, clothed with absolute power to wreak what damage they see fit to attain their ends, can upset the normal economic processes.

Ten years of cotton textiles—1947 to 1957

■ WITH PRICES at the bottom for many years and curtailment of production an important feature of current markets, a turn in the textile cycle is now overdue, W. Ray Bell, president, The Association of Cotton Textile Merchants of New York, stated in the organization's 26th annual survey.

Data assembled by the Association of Cotton Textile Merchants of New York from Bureau of the Census reports and information obtained through the courtesy of machinery manufacturers.

Three previous downward swings in cotton textiles have occurred in the postwar period, Mr. Bell noted, and "each of these downswings of the textile cycle was followed by an equal or longer period of higher production and improved market values." The current downward movement in production and mill activity, he noted, "started in mid-summer of 1956 and has continued for a total period of 16 months through October of this year." As prior downward adjustments have run from 12 to 15 months, "the timetable of past experience would indicate," he said, "that an upturn is overdue."

Production of cotton textiles, according to the Association's "Ten Years of Cotton Textiles" chart which is reproduced here, reached a peak since the war years in calendar year 1956 when 11,528,751,000 square yards were produced as a consequence of the cyclical upswing which carried well through the first half of that year. Since that time adjustments have developed month by month, particularly through 1957, and are now being intensified by a program of reduced activity in important market areas for the last quarter of the year.

In over-all yardage output, the report noted, "deeper cuts for three successive quarterly periods in 1957 have reduced total yardage

	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
EQUIPMENT											
COTTON SYSTEM SPINDLES											
Spindles in place at beginning of year	23,928,000	23,727,000	23,751,000	23,342,000	23,113,000	23,178,000	23,131,000	22,906,000	22,560,000	22,226,000	21,553,000
Increase or decrease from preceding year	+141,000	−201,000	+24,000	−409,000	−229,000	+65,000	−47,000	−225,000	−346,000	−334,000	−673,000
New installation, additions and replacements	416,555	607,358	858,623	649,780	771,665	295,642	267,328	219,282	321,920	403,916	
OPERATION											
CONSUMING COTTON ONLY											
Average number of spindles active on last working day of month	21,588,000	21,391,000	20,063,000	20,456,000	20,662,000	19,944,000	20,051,000	19,383,000	19,137,000	19,064,000	
CONSUMING FIBERS OTHER THAN COTTON, OR BLENDS											
Average number of spindles active on last working day of month	1,198,000	1,337,000	1,174,000	1,295,000	1,261,000	1,337,000	1,323,000	1,327,000	1,541,000	1,534,000	
ALL COTTON-SYSTEM OPERATION											
Average number of spindles idle on last working day of month	1,066,000	1,050,000	2,334,000	1,372,000	1,264,000	1,887,000	1,572,000	2,015,000	1,628,000	1,234,000	
Spindle hours run:											
On 100% cotton	116,040,000,000	115,846,000,000	97,374,000,000	117,753,000,000	115,163,000,000	102,956,000,000	118,647,000,000	108,930,000,000	116,809,000,000	115,090,000,000	
On other fibers, blends	6,346,000,000	7,432,000,000	5,816,000,000	7,502,000,000	7,563,000,000	7,583,000,000	7,487,000,000	7,560,000,000	9,613,000,000	8,550,000,000	
Hours run per average active spindle	5,371	5,424	4,882	5,760	5,735	5,524	5,901	5,625	6,114	6,003	
MARKET											
COTTON TEXTILES											
Production in square yards	11,083,383,000	10,863,129,000	9,391,578,000	11,206,659,000	11,415,218,000	10,593,006,000	11,332,562,000	10,892,456,000	11,319,347,000	11,528,751,000	
Exports in square yards	1,480,025,000	938,796,000	880,255,000	558,678,000	802,427,000	761,595,000	621,005,000	605,047,000	542,389,000	511,622,000	
*Imports in square yards	15,962,000	31,749,000	19,743,000	47,799,000	45,779,000	36,337,000	64,300,000	73,484,000	133,142,000	188,248,000	
Available for domestic consumption	9,619,320,000	9,956,082,000	8,531,066,000	10,695,780,000	10,658,570,000	9,867,743,000	10,775,857,000	10,360,893,000	10,910,100,000	11,205,377,000	
Population at July 1st	144,126,000	146,631,000	149,188,000	151,683,000	154,360,000	157,028,000	159,636,000	162,417,000	165,271,000	168,174,000	
Available for per capita consumption in square yards	66.74	67.90	57.18	70.51	69.05	62.84	67.50	63.79	66.01	66.63	

*Countable cloths only.

of new production by approximately 600 million square yards from the corresponding period of the preceding years." Percentagewise, this amounts to about 7 per cent, and the last quarter cut is likely to prove greater.

Curtailment, featured by elimination of Saturday operation, extended vacation periods, and in some cases the four-day week, has also been emphasized by elimination of 673,000 spindles in place in 1956, followed by a 392,000 mortality in the first nine months of 1957. The number of spindles consuming cotton only is currently 18,147,000 or nearly a million less than in 1956. "Dismantling of these marginal spindles—amounting to 5 per cent over the past two years—insures a further reduction in potential capacity and eliminates them permanently from active market competition." In a later recovery such spindleage will be missed since the average running time per spindle "has become less flexible."

"Market recovery will begin," Mr. Bell predicted, "when the buying trades regain sufficient courage to prepare for future business with confidence. Usually this takes the prod of advancing prices or inability to obtain immediate delivery on wanted merchandise. How soon these conditions will obtain cannot be forecast, but the industry has now come to grips with its basic problem of producing against demand and not for speculation."

In avoidance of overproduction, he saw a healthy trend toward creating inventory demand, particularly with evidence that stocks in distribution are subnormal. "The approaching halt of mill accumulations should mean the final step in our return to a healthy and vigorous market."

Market recovery could well be advanced if the United States government were to abandon policies of discrimination against domestic mills, Mr. Bell said. He pointed out that cotton is held here at prices 20 to 25 per cent above levels at which the government sells the same cotton to mills overseas, often financing these sales to foreign competitors. Shrivelled tariff rates are inadequate to equalize the vast advantages enjoyed by foreign mills in raw material and labor costs.

While the Japan agreement has afforded partial relief from imports, no quantitative restrictions apply to other countries and Hong Kong's textile exports to the United States have increased tenfold. The damaging effect of cheap foreign textiles continues to retard domestic recovery, he said, and the industry must fight for fair and equitable treatment for recognition by our own government.

Note particularly on the accompanying chart the following statistics for 1956:

Cotton Textiles

Production	11,528,751,000	sq yd
Exports	511,622,000	sq yd
Imports of countable cloth	188,248,000	sq yd
Available for domestic consumption	11,205,377,000	sq yd
Population at July 1	168,174,000	
Available for per capita consumption	66.63	sq yd

News in Brief

Japanese Sell PVA Rights. Reversing the usual direction of flow of technical information, Japan's Kurashiki Rayon Co. has sold U. S. rights to its polyvinyl alcohol fiber, Vinylon, to Air Reduction Co., of New York. According to a report from Japan, Kurashiki technicians will help the U. S. company to set up a plant with a daily production goal of 30 tons.

New Cuban Tariffs. Man-made fiber fabrics are included in items on which Cuba raised tariffs at the beginning of the year. New duties will be assessed on value rather than volume, and will be flexible rather than fixed. Cuban customs officials will use their own judgment in assessing individual rates within the general range of duties for a particular item.

Cotton Allotment Drop. "On the basis of data now available, it appears that the [cotton acreage] allotments in 1959 will be about 13 million acres or a drop of approximately 25 per cent [compared to the minimum 17.6 million-acre minimum required by a law expiring in 1959]. It is obvious that this further reduces our efficiency, increases per unit costs and adversely affects our ability to compete for markets," said Agriculture Secretary Ezra Taft Benson in a recent speech.

Industry Lags in Packaging. The opinion expressed recently at the Canadian National Packaging Exposition is that the textile industries of both the United States and Canada are lagging behind other industries and other countries in adopting new packaging machinery and methods, despite cost and labor saving advantages of new equipment, reports the National Federation of Textiles *Bulletin*. One exhibitor attributed this to the fact that the industry doesn't have the money to invest "or their minds are in a state of flux as to what wrapping methods are best and will retain public acceptance."

Summer School for Mill Employees. The school of textiles at Clemson College is considering establishment of a six- to nine-week summer course for selected mill employees.

NCTE Suggests Author Pool for Texts. National Council for Textile Education recommends an experiment in which various faculty members of textile colleges would write chapters in their specialties, to be pooled together in book form. Immediate need is for a text book on opening, picking, and carding, according to NCTE.

"Know" Men are Better Than "Yes" Men

Slashing problems can be as stubborn as burrs in a cocker's tail. It takes more than pat answers to solve them.

That's why Keever sales-service men are trained for the job, and on the job. Each is qualified to work closely with you right in your plant.

Specific mill problems are discussed in general staff meetings with other contact associates having combined experience of more than 120 years.

And behind this group are some 40 other textile engineers, chemists and technicians who serve as "know" men for Keever starches. Count on them to help you.

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Write to the Editors!

Readers are invited to make use of this section for further discussion of published articles, or for discussion of problems arising in the plant. Names will not be used without permission. Payment is made for practical articles or for letters containing manufacturing information.

Address: Editors "Textile Industries," 806 Peachtree St., N. E., Atlanta 8, Ga.

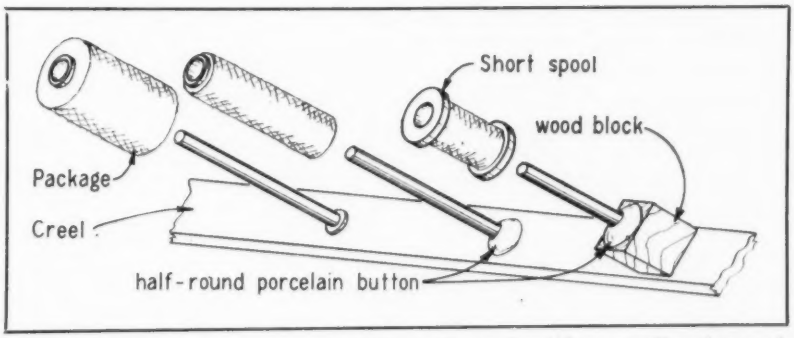
How to reduce friction in twister creels

THE EDITORS:

Yarn breakages often occur in the creels of cotton twisting machines when fine yarns are being twisted. This is sometimes caused by that type of skewer which has only a flat washer for a buffer against the friction created between the spool or package and the creel.

More trouble is experienced when the units are small than when they are full. The reason for the fewer breaks when the units are full is because the full package revolves more slowly than the nearly empty unit. For example let us assume that a full package has a diameter of four inches, and a smaller unit a diameter of one inch.

The circumference of the full unit is approximately 12½ inches, while the circumference of the one-inch unit is only around three



At the left is a full package, and on its skewer, a flat washer. When a small package such as is pictured in the center is placed on the flat washer, the breakage increases over that of the full package on the flat washer. A half-round porcelain button (center skewer) offers less area of contact, is smoother, and offers less resistance to package rolling than does the flat washer. For short packages, a wooden block placed on the skewer moves the package farther from the center of the creel and reduces the angle the unrolling yarn assumes.

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Every kink, short-cut, time-saver, or quality improvement suggestion entered in the contest will be paid for immediately upon acceptance. The $100 award will be made as soon as all entries are adjudged.

The contest rules are simple:

► All contributions must be postmarked not later than midnight, April 15, 1958.

► No limit to the number of entries an individual may submit in any one contest.

► All entries paid for upon acceptance — no waiting. Extra payment for photographs that are usable. Extra consideration is also given kinks accompanied by legible pencil sketches or drawings.

► Entries must not have been published previously and must not be submitted to any other publication.

Send your contest entry to: The Editors TEXTILE INDUSTRIES, 806 Peachtree St., N. E. Atlanta 8, Georgia.

inches. The result is that the smaller unit has to revolve something like four times faster than the full unit. Consequently the friction created by the faster moving smaller unit is much greater than that of the slower moving large unit—even though the larger unit is considerably heavier.

One way to reduce the undesirable friction is to place a half-round porcelain button on the skewer. The shape of the button decreases the area of contact with the unit, whether spool or package, thereby cutting the friction considerably.

In the course of time it will be found that the skewers will become coated with a black sticky substance which has a retarding, or braking effect, thereby creating enough friction to eventually result in yarn breakage. The skewers should be cleaned periodically to prevent too great an accumulation of dirt.

Sometimes it is necessary to run a shorter than normal package in the creels. The angle of the yarn at one end of the unit will sometimes be so great when the yarn passes through the traverse guide eye that breakages will occur, especially if the unit is a double headed spool.

This trouble can be remedied by placing a wooden block on the skewer so that the angle of the yarn will be equalized at each end of the yarn traverse of the unit. The porcelain button, of course, is placed on the block.

Attention to the foregoing will improve the quality of the product, and at the same time save the company hundreds of dollars annually because of the tendency of the workers to cut off the residue, (sometimes considerable) of the diminishing packages when a break occurs.

CONTRIBUTOR No. 9071

We have heard other explanations of the pull exerted by unrolling yarn packages, and we wonder if all our readers will go along with this contributor. Your comments are invited.—The Editors.

Uses 300 psi pressure on slasher squeeze rolls

THE EDITORS:

In your journal of October, 1957, CONTRIBUTOR No. 9050 asks how much pressure he must use on slasher squeeze rolls when he is running 30s yarn. We run with 300 lb pressure on our rubber rolls, and assume we are getting good results —the weave room production is all right, and we get no complaints about bad warps. We do not attribute the weave room success to the 300-lb pressure, however. It is just one link in the chain.

It will help him if he will watch some other factors—size preparation, slashing speeds, etc.

We used to run old slashers at 45 ypm; and when we changed to new high-speed slashers, the superintendent told the overseer that the new slashers must run at 100 ypm and make good warps.

For a while the boss tried to obey orders, and produce good warps too. But he could not do both. (It took a few months of practice for the personnel to learn how fast to run a slasher, to determine its limitations.) Eventually we learned we could run them at 100 ypm and experience the same end breakage we had on the old slashers; but we could not dry the yarn at that speed.

We had to cut out some warps in the weave room as a result. (I need not go into detail over the amount of waste we had there) but we learned something: A slasher's speed or its ability to run with few ends breaking will not help the weave room to run "wet" warps.

Since drying was the trouble, we installed two fans over the slashers, between the warp and the first dry can, to blow against the yarn. These fans dry the yarn faster (we now get 110 ypm with good weaving results) and they also clean the yarn.

CONTRIBUTOR No. 9070

Do this while repairing press-offs

THE EDITORS:

While a press-off is not usually a happy situation, it can be put to good use as a time for needle inspection. In raveling the yarn off the needles ahead of putting up the press-off, the operator should look closely for latches caught under the needle hook. All such needles probably were bad before the press-off occurred, and will remain bad.

Those needles should be removed on the spot. If this is awkward at the moment, break off the hook and remove it after the machine is restored to running order. A great number of holes can thus be prevented.

CONTRIBUTOR No. 9012

"Lest we forget..."

THE EDITORS:

No doubt every manufacturing executive, whatever his rank — has ideas for the improvement of various items in his department pop into his mind while in bed. Sometimes the ideas flash into mind just before going to sleep, or the idea may originate during a waking period.

The ideas indeed may be very good and would be of great benefit

to the mill. But—unfortunately—the ideas do not come to mind the next morning. And often, no matter how much one endeavors to recall them, they will not return.

I had this experience years ago, and felt quite chagrined at losing the ideas. Accordingly, I procured a small pad, 2 x 4 inches in size, and put it on a small stand at my bedside. Then when an idea came to mind I immediately jotted it down. With a little practice the writing was done in the dark—often just a word or two would be sufficient to bring the thought back to mind the next day.

However, I found that sometimes the notation was rather faint and therefore not legible. To overcome this I bought a charcoal pencil from a store dealing in

artists' supplies. This pencil is an ordinary size wooden pencil with a charcoal or graphite filler, and makes a heavy black mark that can easily be read.

CONTRIBUTOR No. 9072

More about making nylon tow—a reply

THE EDITORS:

(*This is a reply to* CONTRIBUTOR NO. 8972, *September*, 1957, *p.* 219. —*The Editors*).

We use a converter and follow with a gilling and two operations of pin drafting. Then we spin on a 10 x 5 roving frame (worsted system) equipped with long staple changeover.

We have found that the 6″ cutter rolls are more desirable on the Pacific Converter because the longer staple requires less twist and makes a loftier yarn.

The double variable cutting attachment is advantageous because a better fiber dispersion is obtained. In other words, both short and long fibers are made in equal proportions.

The single variable cutter attachment makes the same amount of short and long fibers but the uniform dispersion of these fibers would have to be accomplished by blending at a later process.

We are using the modified worsted system and feel that this system is more economical for rug-type yarns; however, we also believe the woolen system is more flexible where fiber length is a consideration.

In our experience, the woolen system produces a somewhat loftier yarn but with less uniformity than the worsted system.

CONTRIBUTOR No. 8973

Add a second knitting take-up wheel

THE EDITORS:

Running extra heavy fabrics on the Scott & Williams knitting machine puts a strain on the take-up motion and the small take-up belt which often causes too much slippage and belt stretch to occur.

We have found that the condition can be corrected for all time by adding a longer shaft on which the take-up wheel fits. Onto this shaft we have mounted a second take-up wheel so that the two wheels will be side by side. An extra belt is fitted to run off in the groove to which the brake shoe is attached.

CONTRIBUTOR No. 9020

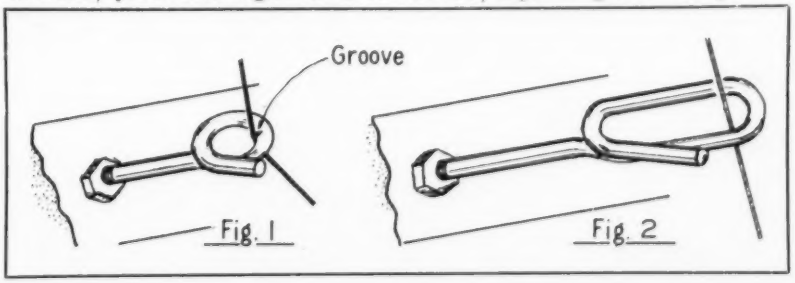
A way to avoid grooves in thread guides

THE EDITORS:

One of the annoying things that the writer had facing him was the wearing of grooves in the brass guides on wet cotton twisters. The guides were of the short round pigtail type, illustration, and the yarn would cut a groove into the inner side of the guide, such as is indicated there.

The reason for the cutting was the sharp angle of the thread as it passed through the guide. This groove would catch all the inequalities in the yarns and in fine numbers, yarn breakages were a frequent occurrence.

The grooves are not always visible, depending on the angle the



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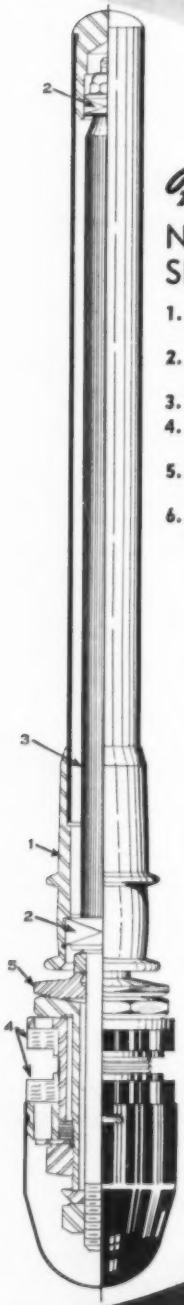

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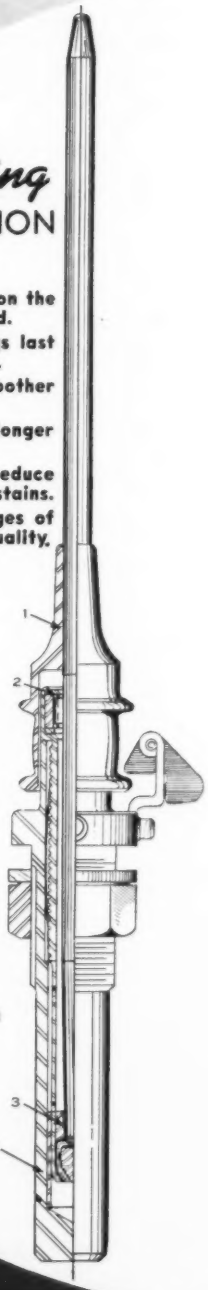
2—ROLLER BEARING BOLSTER
3—STEP BEARING
4—BASE



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yarn takes. Therefore, when breakages occur a knife edge moved around the guide will soon reveal the source of trouble.

Another fault with the round pigtails was that there was a considerable dwell at each end of the traverse-guide, which often resulted in grooves in the top and bottom brass rollers. The reason for the dwell was that the opening of the pigtail was something like one-quarter of an inch. The result was that whenever the traverse reached its limit, left or right, the yarn remained in the same spot until the guide-eye could contact it again.

In studying the situation with the idea of eliminating the dwell, the guides were turned slightly sidewise. This procedure helped to reduce the dwell, but it still left the problem of the groove in the pigtail.

To overcome the troublesome factor of the groove, a long guide was substituted in place of the short guides, one which allowed the yarn to travel freely up and down without remaining at one spot as was the case with the short pigtails. The long guides were turned sufficiently so that the yarn touched the guide only gently. By turning the guides the dwell was completely overcome. It may also be said that the opening in the long guides was narrowed down to something like one-eighth of an inch.

After the installation of these longer guides there was no further trouble, either with grooves or dwell.

CONTRIBUTOR NO. 9065

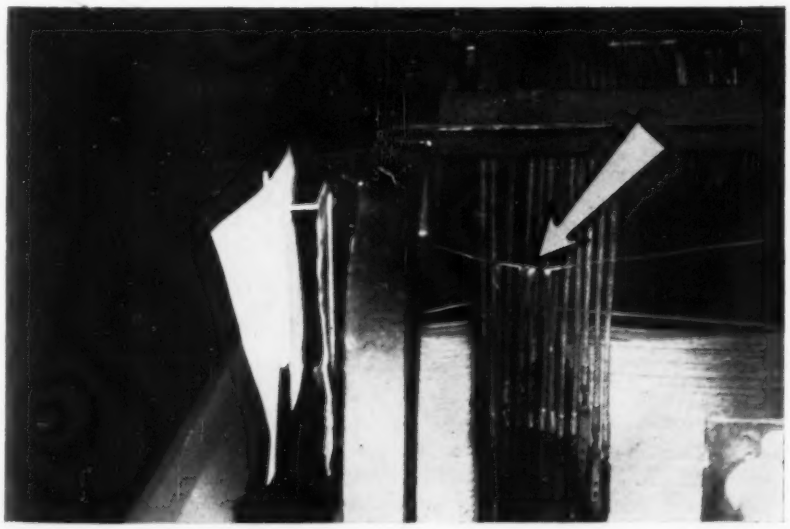
Prevents leno breakouts

THE EDITORS:

Here is a kink which I have found very handy on any looms where a large number of harnesses are used; where (because of heavy sley) extra spring has to be used; or where there are several harnesses carrying a very few warp threads each (these have a tendency to bow in the center).

I fasten a wire to the loom arch a few inches above the harnesses and outside the selvage limit. On this wire I hang sufficient steel heddle bars to go between the harnesses. They extend downward to within inches of the floor, and keep the harnesses from rubbing and catching each other. By hanging loose this way, they accommodate themselves to the movement of the harnesses. I find them especially good when weaving glass leno, where a catching harness means half a warp out.

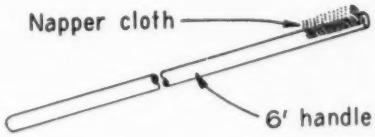
CONTRIBUTOR NO. 9068



Cuts broken knitting ends

THE EDITORS:

On our large knitting machines which have 48 feeds or more, we were unable to blow all the lint out



of the stop motion without climbing to a level which would let us reach the top-most members. Then when we did get within range and blew the lint away, we often spent 30 minutes putting each end back in place.

We now blow off those regions we can reach comfortably from the floor. The balance of the lint we remove with a handle which carries a sizeable pad of napper cloth on one end to be used as a brush.

CONTRIBUTOR NO. 9048

Needle threads guide

THE EDITORS:

On the Supreme knitting machine is a guide with a small hole through which the yarn must be threaded. Due to the position of the guide it is almost like threading the small eye in a sewing machine needle—tedious and a waste of time trying to push the yarn through the hole with the fingers.

To make threading easier for the knitter a 48-gauge knitting needle can be kept handy for use as a hook. Insert the fine needle in the guide hole with one hand, and place the yarn in the hook of the needle with the other hand. When the needle is withdrawn the thread is pulled through with it.

CONTRIBUTOR NO. 9022

HOW OTHER MEN MANAGE

Quick-tying rope speeds materials handling

Forklift trucks can handle loaded pallets easier when the containers on the top tier of each load are tied together. Of several tying methods, one of the fastest and easiest is with rope that has quick-tying metal fasteners attached.

The rope comes with a loop formed at the end that is held by the quick-tying fastener. It can be tightened and tied by one twist of the wrist and untied by pulling the free end.

In comparing plain rope ties with quick-tying rope ties, industrial engineers of the Agriculture Marketing Service found that the quick-tie is 63 per cent faster to tie, and 75 per cent faster to untie.

There is no struggling with knots that slip because there is no knot to tie. Greater tension is placed on the rope through the quick-tie so the load is more securely held. The quick-tying rope does not bind on the load so it's much easier to untie.

Plain rope ties are usually cut in 22-foot lengths. A three-inch lasso is made at one end and a knot is placed at the other end to prevent raveling. The warehouse handlers make up a supply of these ropes periodically. The quick-tying rope costs a third more than plain rope, but this does not include the cost of labor for preparing the plain rope tie.

By tying the top tier of the pallet load, the pallet can be handled faster. There is less danger of dropping and damaging containers and, in making sharp turns, the containers will not slip off the load if a corner of the load is struck.

There are several other ways of tying the containers in the top tier of the pallet load. Some of these are: Placing a large piece of heavy paper under the top tier of cans, using adhesives, steel strapping, binding wire, or rope ties.

The strap, wire, and rope tie are the most effective from the standpoint of general purpose warehouse operations. Rope ties are more widely used because they are not applied by special equipment and are somewhat more economical.

U. S. Department of Agriculture, *Marketing Activities*

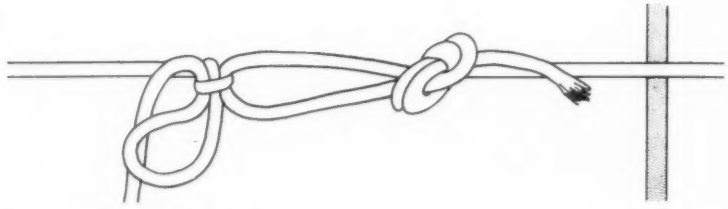


Figure 1—A pallet load tied with sisal hemp rope

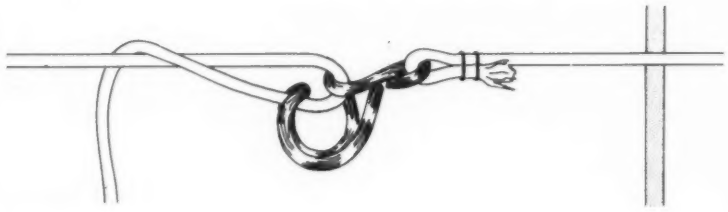


Figure 2—A pallet load tied with the quick-tying rope

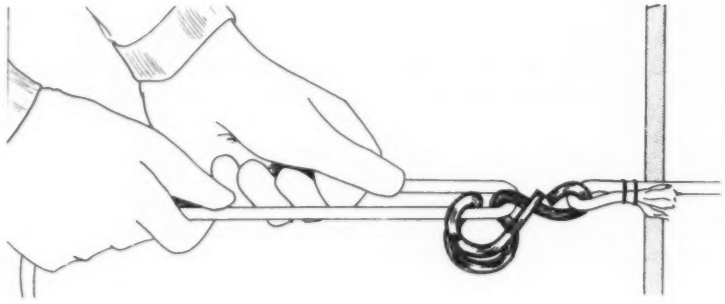


Figure 3—Tying a load with the quick-tying rope

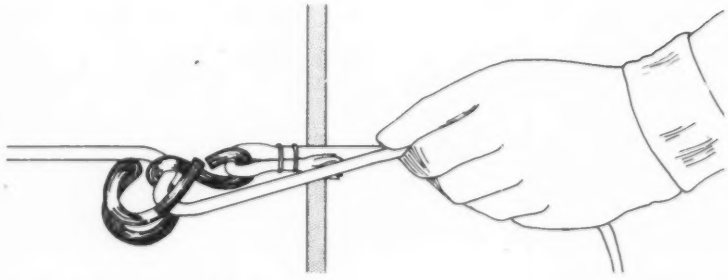


Figure 4—Releasing a quick-tying rope

Knitting Section

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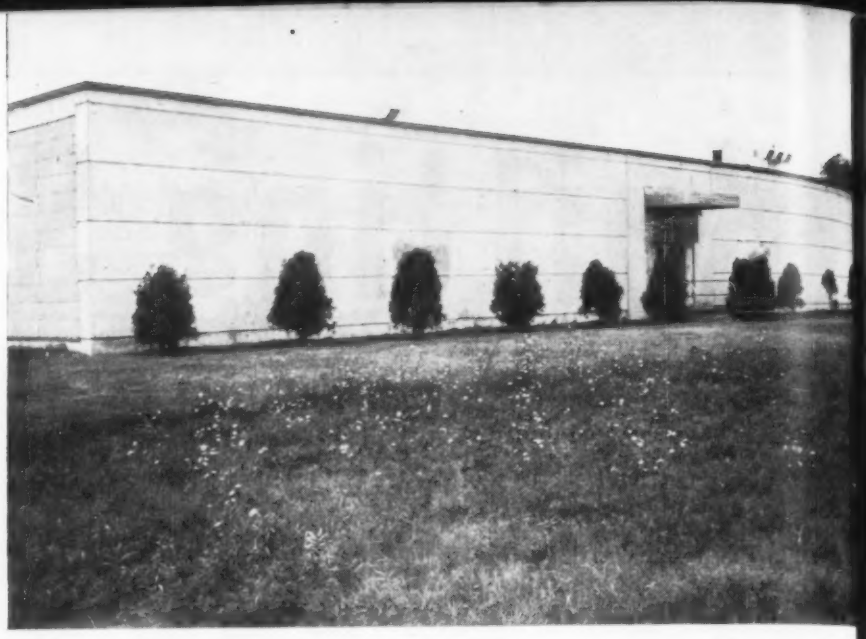
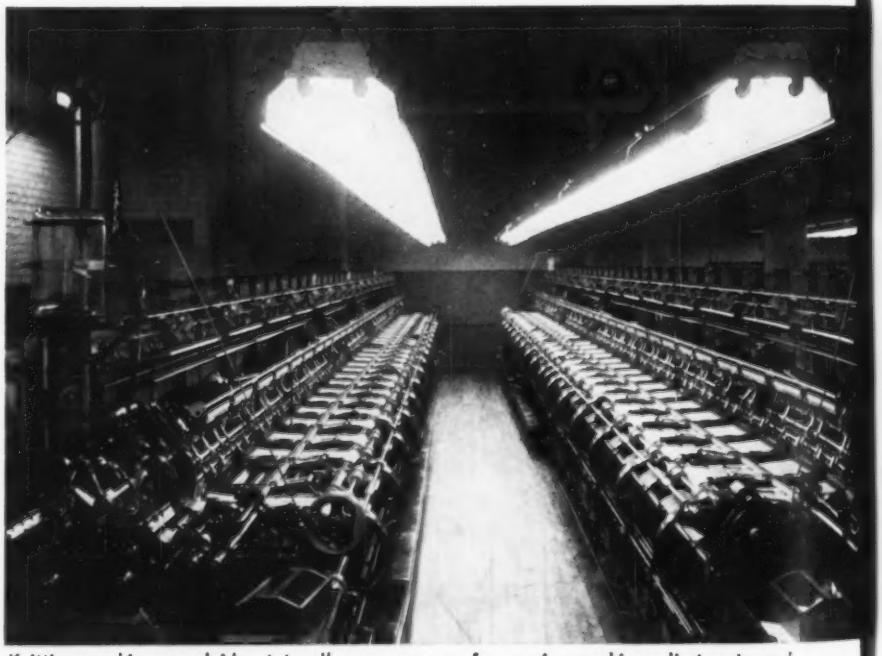


This air-conditioned plant, with insulated walls 18" in thickness, was constructed to help maintain uniform year-round conditions in an extremely variable Canadian climate.

This F-F knitting mill is versatile

Staff prepared

Exclusive



Knitting machines are laid out to allow easy access for repairs, machine adjustments, and yarn supply replenishment. Hardwood floors reduce foot fatigue and a continuous lighting system affords shadow-free lighting for proper maintenance of knitting machinery elements.

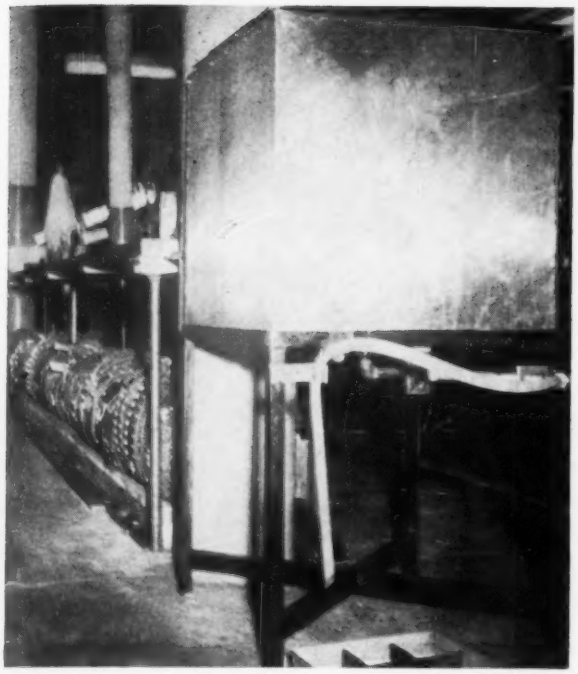
WITH operations in six plants utilizing every natural and synthetic fiber, Belding-Corticelli, Ltd., now entering its 82nd year, supplies Canadian markets with a diversified line of products, from sewing threads and narrow fabrics to knitwear and full-fashioned hosiery.

During its post-war modernization period, Belding-Corticelli built a modern hosiery knitting plant in Greenfield Park, Quebec, located five miles from Montreal. The plant is now in its sixth full year of operation. This air-conditioned structure, with 20,000 sq ft of floor space, houses 24 full-fashioned machines and essential auxiliary equipment.

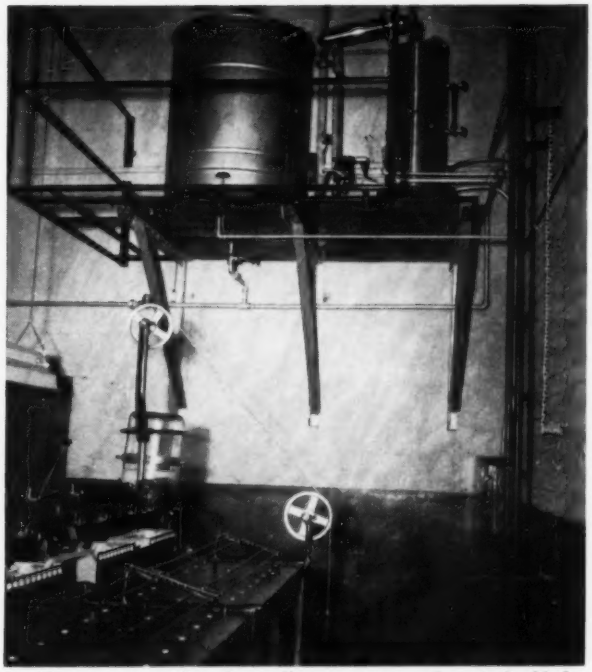
Production of the Greenfield Park plant, concentrated mainly in the 51-, 60-, and 66-gauge range, is marketed under the well-known brand names Corticelli, Beldings, and Daisy Fresh. The firm also produces Christian Dior hosiery through an exclusive arrangement with this famous Paris designer*. A part of the production also consists of a 45-gauge lisle stocking for a smaller but substantial Canadian market.

Much sound planning went into the construction of the plant in order to insure uniform year-round operating conditions, essential to quality knitting. The extreme fluctuations in seasonal temperature and humidity of the Canadian

*Deceased since this article was written.



Mixing and storage tank for lubricant in foreground. A stockpile of pattern chains directly behind tank eliminates delays and change-over time.



Distilling unit provides chemically pure water of neutral pH for lubricant dilution, decreases machine wear and tear and prevents dyeing and finishing defects from hard water.

climate required a building of rugged construction, with walls 18 inches in thickness. Its air conditioning equipment includes a 60-ton refrigeration unit to maintain the desired 50 per cent relative humidity and 80 F temperature throughout the year. In addition, air filtering and air washing equipment affords a dustless atmosphere essential for the proper functioning of knitting elements.

Adequate fire protection equipment includes automatic pumping, and a water reservoir of 160,000 gallons is available.

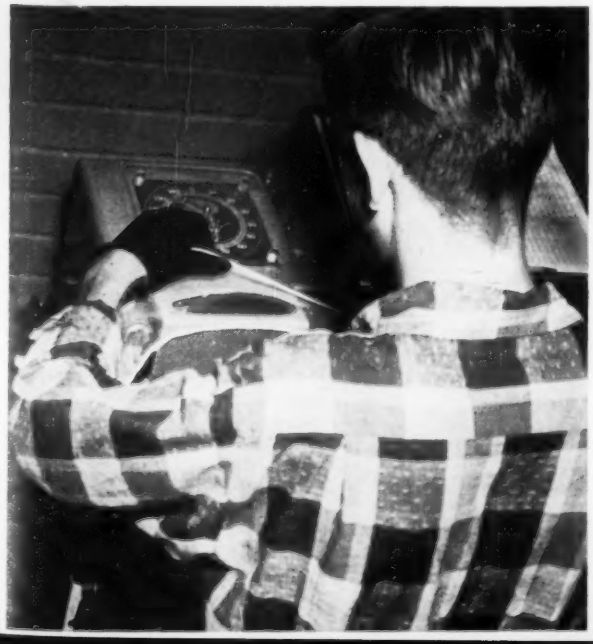
Knitting equipment includes 22 Reading, 30-section, F-F machines and two Liebernecht, 32-section F-F machines, laid out to allow easy access for repairs, machine adjustments, and yarn supply replenishment. There is uninterrupted fluorescent lighting, concentrated over each machine, with perforations in hoods to throw diffused light on the ceilings. This arrangement allows shadow-free lighting that is particularly important to proper maintenance.

Preventive Maintenance Program Pays Off. Under its preventive maintenance program, now in full operation, at least four machines are reconditioned per year by a service staff of five. Essentially, this includes a complete machine over-hauling and the replacement or renewal of knitting elements.

A substantial investment has

(Continued on page 136)

The laboratory assists in the quality control program. Here a laboratory technician determines courses per inch of stocking on the Marvel Meter, one of several instruments used in testing stocking uniformity.



Partial view of dyehouse, showing row of hosiery dyeing machines with temperature control instruments above. Other equipment includes scouring and bleaching tanks, extractors and dryers, and a continuous ribbon dyeing range.

Two points considered most critical at Chipman-LaCrosse Hosiery Mills

Sock size and wrap yarns

Staff prepared—Exclusive

ONE MAN is employed on each shift to check sizes on Banner Wrap and HH-PW knitting machines at Chipman-LaCrosse Hosiery Mills, East Flat Rock, N. C. This successful mill has found that the two most critical considerations are size of socks and wrap yarn.

Sizes may change upon putting up a different cone of yarn, and wrap yarns must be watched closely because the cops of wrap yarn are small, and the supply of yarn on each cop becomes exhausted quickly. If a cop should run out before a sock is completed, a

About 300 Banner Wrap and HH-PW knitting machines are divided into blocks of 40 machines each. Each block is attended by four knit-

One man on each shift is assigned exclusively to checking sizes on all knitting machines. After this "sizer" finishes checking all the machines in the plant, he immediately starts again on another round.

Some of the machines use 36 cops of wrap yarn, and the knitter must watch these carefully. Imperfect socks are made if a wrap yarn is misthreaded, if a cop of the wrong color is put on the machine, or if the supply of yarn on a cop runs out before a sock is completed.

ters and one fixer. The knitters are responsible for reporting difficulties and imperfections to the fixer in charge of their block.

Management officials at Chipman-LaCrosse Hosiery Mills get first-hand answers to production questions in the knitting room; l-r: Ivan Waller, executive vice-president and general manager; Charles Chipman, Jr., president and treasurer; and K. H. Katzenmoyer, manager.

Knitters make up lots of five dozen pairs and turn them in to the lot checker. The lot checker issues another ticket for more production. The cards in the file (background) are production tickets.

Change order is attached to production ticket for the last five-dozen lot of the preceding size or style. The knitter notifies the fixer of the change; he then makes the settings and adjustments.

second is made. Some machines use 36 cops of wrap yarn, and the knitter must watch these carefully.

Wood and metal boards are provided for each half size, and these are used by the "sizer," who also checks length, wrap colors, body yarns, and any other pertinent details to be sure the socks are of correct construction and that the correct yarn is used. Quality with little waste is a goal at this mill.

If construction changes should be specified, the sizer starts at one end of the knitting room and goes to each machine for a thorough check. Upon completion of a round he starts over again, thereby providing a continuous check. When a size is set on a machine, the fixer is responsible for counting links correctly at the time of the size change; however, the sizer always double-checks.

There are about 300 machines in the knitting room, and these are divided into blocks of 40 units each. There are four knitters and one fixer for each block of machines. The fixer is responsible for the machines, and the knitter is responsible for putting on yarn, inspecting socks as they come off the machine, and reporting any imperfections or difficulties to the fixer.

Each knitter makes lots of five dozen pairs and turns them in to a lot checker, who issues another ticket for an additional five dozen to be produced. So long as the knitter is issued a ticket identical to the preceding one, all details remain the same on the knitting production and machines. However, when the lot checker gives a ticket denoting a size change, style change, or any other change, the ticket has a change notice attached.

When the knitter gets a change notice (which is attached to the ticket for the last five-dozen lot of the preceding size or style), she notifies the fixer, who adjusts and sets the machine for the change. This system of operation has been instrumental in preventing over-production in filling customer orders.

The checker makes out a payroll slip for each five-dozen lot, and these slips are sent to the payroll department for use in figuring compensation for the operatives. The stub from the bottom of the knitting ticket is torn off and sent to the production departmen to keep track of production.

A bulletin board for fixers is displayed in the knitting department. Fixers are reminded to check for broken and missing wrap yarns, bad tops, drop stitches, and double-sole misplating.

Versatile F-F mill

(from page 133)

also been made in a stockpile of style chains to keep change-over time to a minimum. This long-range economy measure has paid off in increased production.

Quality Control Extends Into Operational Levels. Aside from the plant's built-in features, lay-out of machinery and the like, all aimed at standardizing operating conditions, quality of product, and ease of operation, management policies have extended into the operational levels as well. An incentive program, directly tied in with hosiery quality, has been in operation among knitting personnel. Under the program, both knitter and fixer responsibilities are clearly defined. In effect, the program requires the replacement of defective work with quality knitting.

Among the more important duties of the knitter are casual and periodic examinations of the knitting operation. His daily routines not only include inspection for the obvious defects of knitting but for the presence of abnormal conditions, such as incorrect threading and wrong yarn type, which if allowed to continue could involve large quantities of production. An elaborate hosiery numbering system makes possible easy tracing of defects to machine and knitter origin, and colored marking crayons are used to denote each operating shift.

The knitter also checks uniformity of tension, giving particular attention to size of yarn packages when heel and sole portions are being knitted, to prevent irregular stocking lengths.

The fixer's responsibilities center primarily about the knitting elements, but he also plays a direct role in quality control and receives periodic reports of product quality from the dyeing and finishing department.

Laboratory Assists Quality. Along with visual inspection at the machine, laboratory testing for uniformity of product is carried out daily with an accurate record kept of each machine's (knitter's) performance. Uniformity in courses per inch of stocking is measured on the Marvel Meter, while periodic tests are conducted on the Premier Selvage Length Tester to measure knitting head lengths. As a further safeguard, the quality control program calls for early dyeing and finishing of hosiery. This practice reveals the status of daily production quality.

The range of hosiery manufactured at Belding-Corticelli includes the following: a 45-gauge, 30-denier nylon hose; also a lisle stocking; a 51-gauge, 15-denier nylon; a 60-gauge, 15-denier nylon; and a 66-gauge nylon hose that includes 12-, 15-, and a twin 7-denier nylon.

Versatile Dyehouse Handles Many Products. After knitting, stockings are preset for one hour at 200 F. Then, following seaming, they are carefully examined, preboarded and made ready for dyeing and finishing at the Montreal plant. In addition to the dyeing and finishing of hosiery, the dyehouse is equipped to process decorative ribbons and other narrow fabrics; and includes, besides, a continuous ribbon dyeing machine, nine Smith-Drum rotary dyeing machines, scouring and bleaching tanks for tapes and ribbons, extractors, and dryers. An outstanding feature of the dyehouse is a fog-free atmosphere with a seven-minute air change-over.

After the dyeing and finishing operations, the hosiery is dried and carefully inspected before packaging and shipment.

Franklin-Dyed YARN
What it Means to YOU

X-ray view of Franklin Package, the "secret" of uniform shades. Don't say "package dyed". Say "Franklin-Dyed".

"Franklin-Dyed" is something more than a name or an identification mark. It is also a symbol — a symbol of many things. For instance:—

QUALITY

We dye exclusively on the Franklin compressible spring. This permits uniform density of packages, which promotes uniform penetration of the dye liquor and uniform shades.

SPECIALIZATION

Yarn dyeing is our specialty. We act as yarn merchants to get dyeing, but we don't dye to make yarn sales. Our 5 plants and our entire organization have but one objective — to provide the best yarn dyeing service available.

CAPACITY

With 5 dye plants, hundreds of package dyeing machines in dozens of sizes and winding equipment to match, we are literally the largest package dyers in the world — ready to dye all types of spun fibres in any quantity.

CONSULTATION

We can help you with your color problems. We have unequalled laboratory facilities, a staff of highly skilled technicians and unequalled experience in time, variety and volume which are at your service.

AVAILABILITY

Our 5 yarn dyeing plants, strategically located in 5 different textile centers, are conveniently yours. Contact our nearest plant or office.

Franklin Process

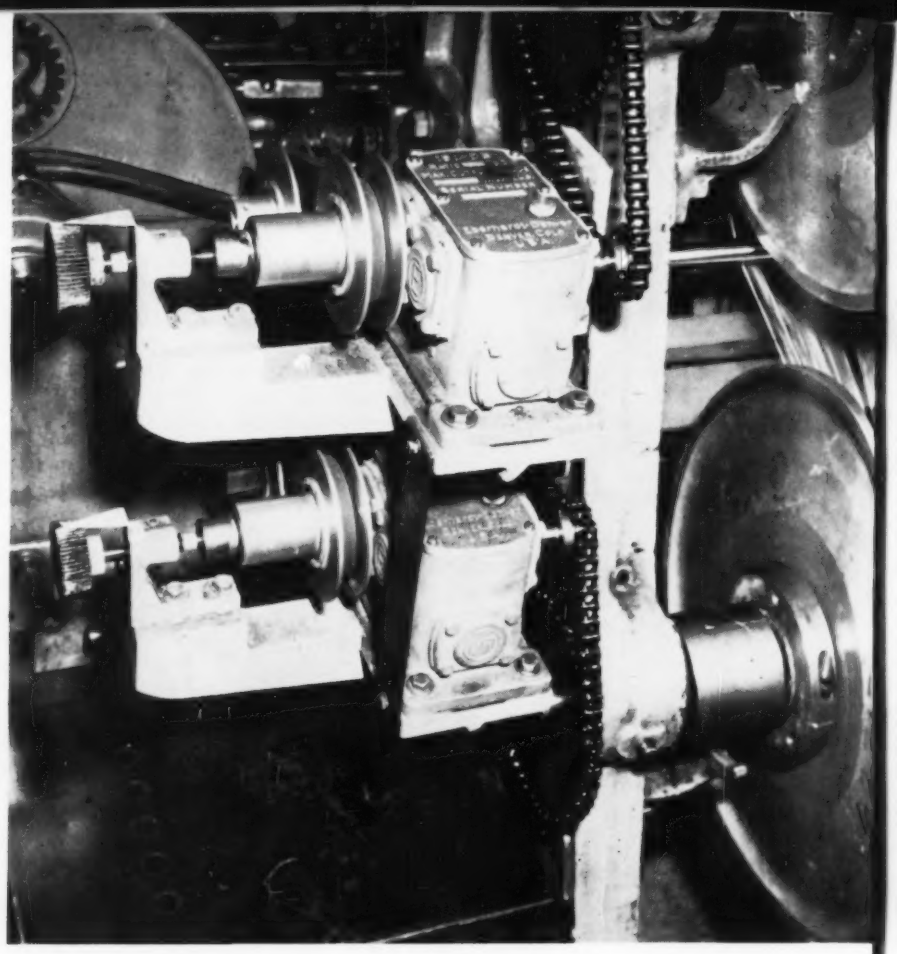
Dyers of cotton (carded, combed, mercerized)
Orlon* (yarn & tow) Acrilan • Dacron** • Ban-Lon®
Helanca • Spun Nylon • Spun Rayon • Blends
• Wool and Worsted yarn

Providence • Philadelphia • Greenville
Chattanooga • Fingerville, S. C.
New York office — 280 Madison Avenue

*Trademark for Dupont's acrylic fibre
**Trademark for Dupont's polyester fibre

711-7

Tricot let-off eliminates shadow marks



Staff prepared

Exclusive

A SPECIAL let-off unit is installed on tricot machines at Mojud Lingerie, Warp Knit Division, Wilmington, N. C. Shade marks in tricot fabric have been eliminated by this device, according to E. J. Filip, plant superintendent.

The unit gives more uniform let-off by rotating warp beams at constant speed. The let-off device is checked and reset about once in eight hours on a fresh beam of large diameter, and the checking interval diminishes to about once every two to three hours as the yarn supply on the beam decreases.

The brake-type let-off formerly used was affected by wear and temperature changes, which produced shadow or shade marks in the tricot fabric. Maintenance on the brake-type unit was relatively high, and repairs were necessary every two-three months, thereby contributing higher maintenance costs than the new units, which are giving excellent service and producing better quality goods.

Maintenance on the new let-off is negligible. It has been necessary to replace one V-belt, and there have been no mechanical breakdowns in about 18 months of continuous operation.

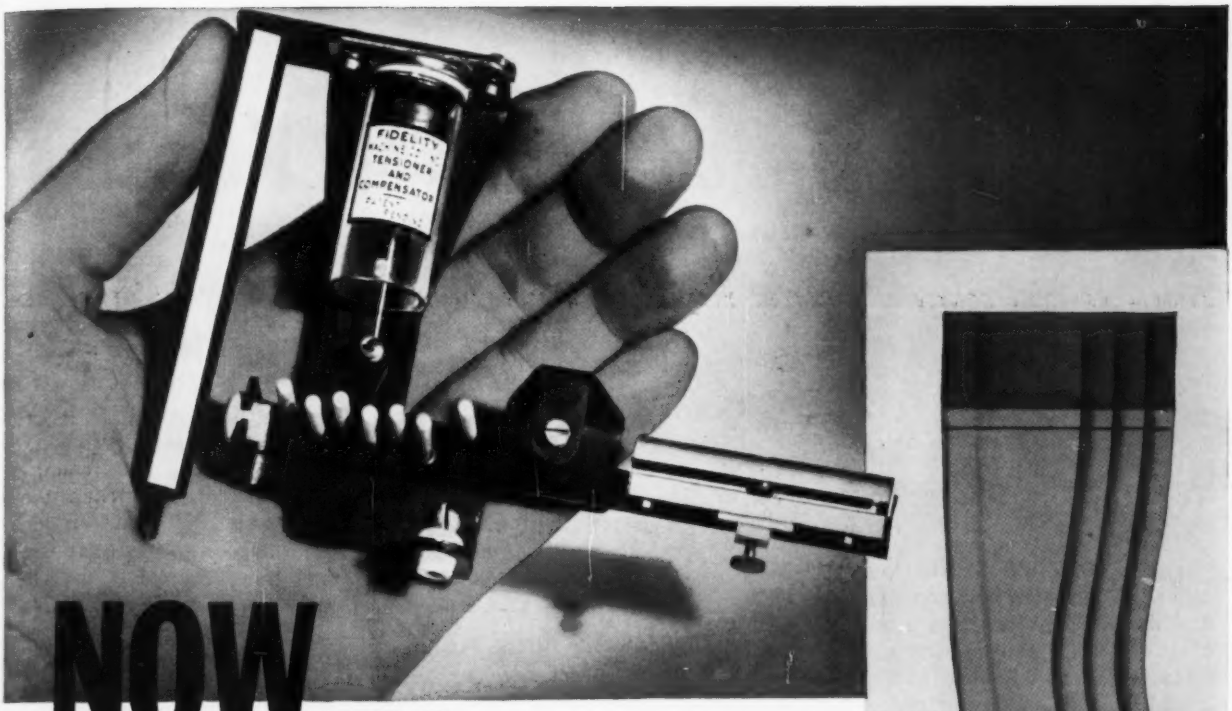
Called a Gibbs positive gear let-off unit, the mechanism is operated from the machine cam shaft, no separate power unit being required. From the tricot machine cam shaft, the let-off is driven by a roller chain drive to each counter-shaft for the top and bottom beams. From each counter-shaft base, which comprises aluminum castings and shafts supported by ball bearing pillow blocks, an 8 to 1 variable speed unit connected to the reducers provides a wide speed range.

The final drive from the output shaft of the reduction unit to the top and bottom beams is a separate roller chain drive to each beam. This unit gives a positive action and does not permit knitting machine vibrations to cause any change in speeds, thereby adversely affecting quality.

The runner gauge is operated in conjunction with the let-off unit, although it is a separate unit. With these two units operating together, runner lengths are held to exact tolerance.

Runners may be checked easily by looking at the marks stamped on the runners, which are knitted into the selvage where further visual checking is done. As the warp becomes smaller, the runners become shorter but by periodic inspection of the marks on the runners, the condition is noticed when the marks begin to separate. When this condition arises, a slight adjustment is made on the let-off unit.

These let-off units are similar to those used on late-model Kidde tricot machines, and are designed to fit any tricot machine. The let-off and runner gauge units were supplied by Gibbs Machine Co., Greensboro, N. C.



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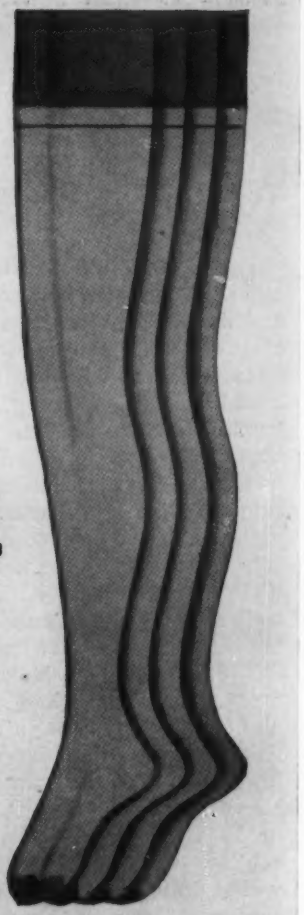
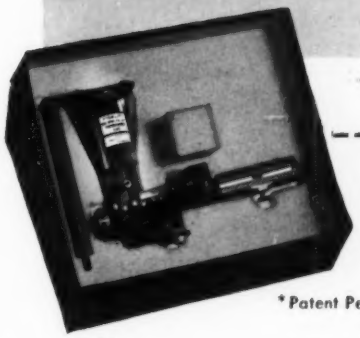
- **Tension adjustable in 1/10 gram increments**
- **Adaptable to *all* makes of Seamless Knitting Machines**
- **Maintains s-t-r-e-t-c-h specifications**



ONLY FIDELITY GIVES YOU LENGTH CONTROL *PLUS* YARN TENSIONING *PLUS* COMPENSATING—at a fraction of the *cost* for other length control devices *alone!* Mail this coupon for details *today.*



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Using stretch yarns on Komets?

A delayed loose course attachment may be the answer to one of your production problems

by K. O. Metz
Exclusive

KNITTING Helanca and other nylon stretch yarns on Komet machines brought quite a number of problems. As usual the problems began in knitting and followed in the customary order of looping, dyeing, boarding, and finishing. Now there is an attachment for Komet Machines which simplifies those problems.

Called the delayed loose (looper) course attachment, the name given it by the machine builders describes its functions to an extent, but it does not describe its benefits.

The main reason Helanca created a problem in looping is the ability of this type of yarn to contract after knitting. When a sock knitted of Helanca yarn to fit a size 12 form will just fit a size 9 or 10 a few hours later, one can realize what such contraction would do to a loose course for the loopers. To make bad matters worse, goods lying around for a week or two allowed the stitches really to get set. Then, too, stretch yarns generally present a bad raveling problem, especially when the toe, loose course, and looper rounds are all made of the same yarn. A yarn change after the loose course will correct this, but it will not help looping.

As everyone familiar with knitting and looping seamless goods knows, the looper line or looping course consists of one complete course of extremely loose stitches knit immediately after the toe is completed, when the machines change from reciprocating to circular motion.

The knitted fabric of the ring toe, toe and looper rounds (or finger hold) should be uniform with respect to firmness, with no visible difference in the length of stitches. Fewer loose courses will be necessary if and when the ring toe, toe and looper rounds are knit uniformly.

Knitting the looper rounds extremely loose makes it necessary to make an excessively large loose course in order to make it visible — frequently beyond the means provided on the machine which control the amount of loose course which can be produced.

This is true in knitting any type of yarn, including Helanca and other stretch yarns.

The one practical solution here is using the delayed loose course attachment, which permits making the toe out of stretch yarn, changing yarn immediately when the toe is completed to a non-stretch yarn, and making the loose course after the yarn change — not in it. There are a number of yarns on the market today which present problems similar to those caused by Helanca yarn. The delayed loose course attachment developed by Scott & Williams for Komet machines will be found beneficial with quite a number of different kinds of yarn. Quite often some of our problems in the mill have already been solved by the machine builders. When this happens we are paying for an attachment we do not have and it's costing us real money.

Where the attachment is installed and how it is operated.

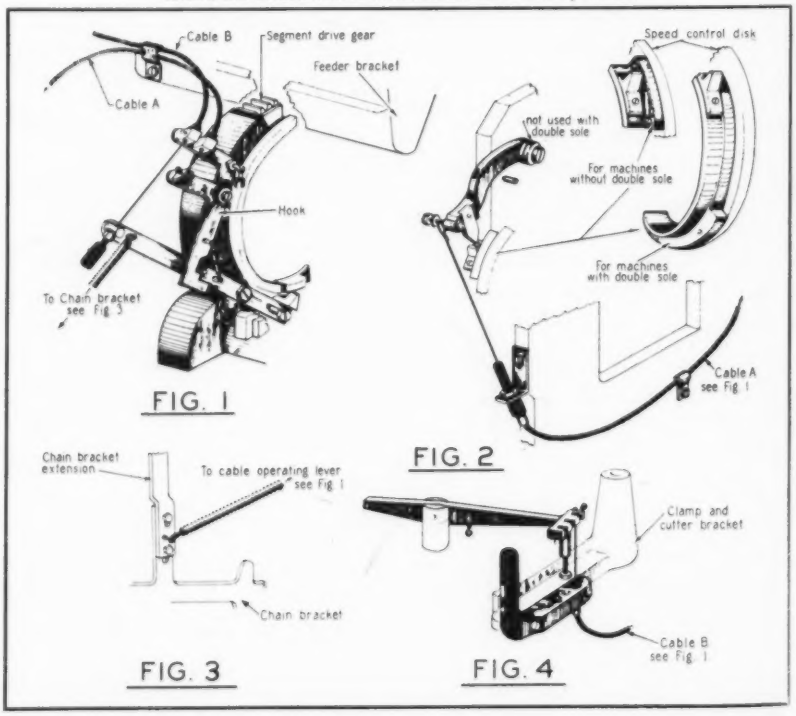


FIG. 1

FIG. 2

FIG. 3

FIG. 4

PLEASE WASH

Dirty yarn and hard

Textile Industries

13

Textile Indu

YOUR HANDS!

ends start this way

lustries POSTER SERVICE

This is one of a series of manufacturing hints and employee reminders in poster form, designed for placing on mill bulletin boards. Reprints are available. Write to The Editors, "Textile Industries," 806 Peachtree St., N. E., Atlanta 8, Ga.

DON'T USE
This is a job for

Textile Industries

14

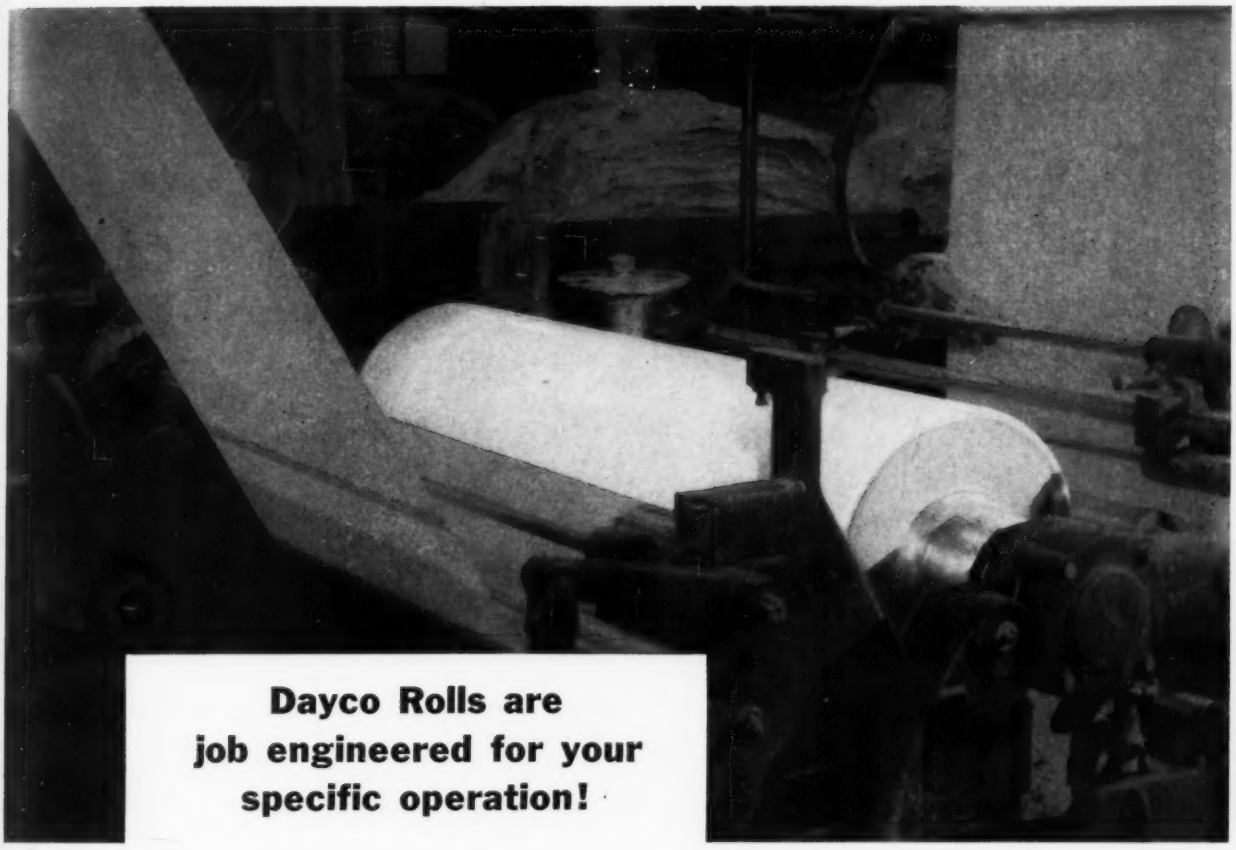
Textile Indu

THE KNIFE!
the quill stripper

ustries POSTER SERVICE

This is one of a series of manufacturing hints and employee reminders in poster form, designed for placing on mill bulletin boards. Reprints are available. Write to The Editors, "Textile Industries," 806 Peachtree St., N. E., Atlanta 8, Ga.

DAYCO FINISHING ROLLS



Dayco Rolls are job engineered for your specific operation!

Dayco "job engineered" finishing rolls are built to do just one job—the job you want it to do! As a result, users report that Dayco finishing rolls have lasted 2 and 3 times and even 9 times longer than the rolls they used before.

One mill's rolls were being ruined by tramp metal in a mere 4 months. A Dayco roll—specifically designed for this trouble-spot—has been on the job for a year and will last for many more months.

300° heat near another operation ruined a rubber roll in approximately 6 to 8 months. A tailor-made Dayco roll has lasted for 18 months now and still shows no signs of deteriorating.

A special back-up roll for a coating process had an average life of 60 days. It was replaced by a Dayco "job engineered" roll that is still giving excellent service after 18 months . . . working two shifts a day.

Next time you need a finishing roll—whether it's special or standard—have it "job engineered" by Dayton. You can contact the Dayton Roll Engineer by writing or wiring The Dayton Rubber Company, Holfast Division, 1486 Lakewood Avenue, Atlanta, Ga.

Dayton Rubber

The DAYTON RUBBER Co., Dayton 1, Ohio
West Coast Distributor, Tillicum Rubber Co.
Lacey, Washington

The Dayton Rubber Co., Holfast Division
1486 Lakewood Avenue, Atlanta, Georgia

Gentlemen: Please rush me "All the Money-Saving Facts about the New Dayco Finishing Roll."

name_____

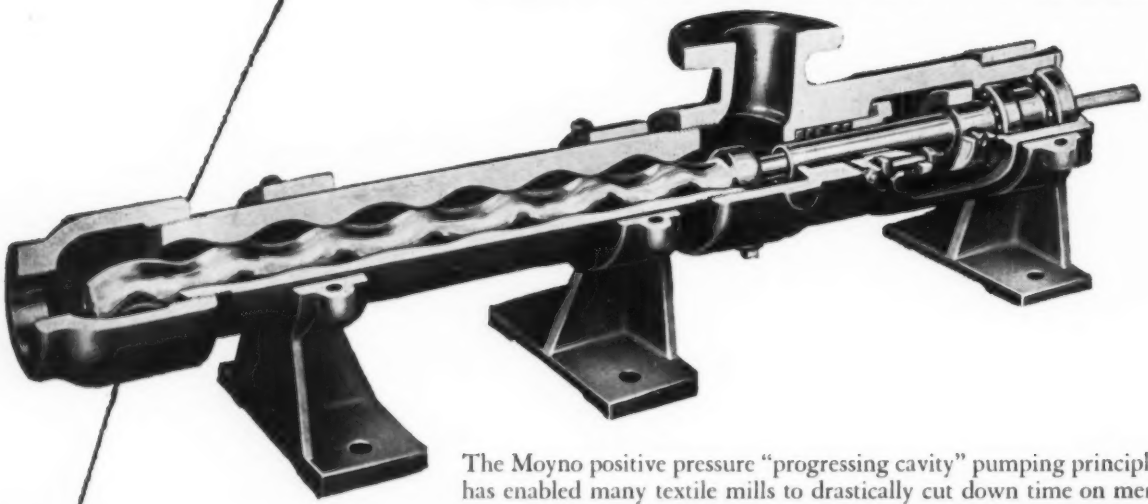
position_____ company_____

address_____

city_____ state_____

in textile mills . . .

MOYNO® PUMPS CUT DOWN TIME



The Moyno positive pressure "progressing cavity" pumping principle has enabled many textile mills to drastically cut down time on mercerizing and sizing machines originally equipped with rotary pumps which wear quickly and lose capacity and suction characteristics. Moyno is the only pump that can satisfactorily handle many caustic alkali solutions without excessive wear, foaming or aerating.

As shown above, Moyno Pumps have a screw-like rotor that revolves in a double threaded stator creating progressing cavities which smoothly move material through the pump. They will pump anything that will move through a pipe . . . even plaster and non-pourable pastes!

Moyno Pumps are available in capacities up to 500 gpm and pressures up to 1000 psi.

Examine your processing methods. No doubt there are several places where Moyno Pumps can drastically cut costs. Ask us, we'll give you a frank answer. Send us an outline of your problem today! Write for Bulletin 30-TI.

R&M®

ROBBINS & MYERS, INC.

SPRINGFIELD, OHIO | BRANTFORD, ONTARIO

Motors | Fans | Hoists | Moyno® Pumps | Propellair® (Industrial) Fans

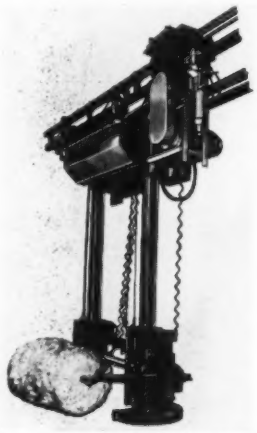
NEW PRODUCT PARADE

Machines and Equipment . . . Supplies and Services . . . Dyes and Chemicals . . . Books

Please note: Claims made in all of these announcements of new developments are of necessity based upon information furnished by the respective suppliers.—The Editors.

Watch lap weighings from office or floor

The American MonoRail Lap Balance and Lift Car is a device for the maintenance of weight tolerance of the cotton picker lap. The machine not only checks lap weight (by measuring the variance from a given standard weight), but also handles the lap mechanically from the picker to an overhead monorail lap handling system.



Indication of weight tolerance is also shown on a remote indicating head which can be placed at any desired position to enable supervision to keep a constant check on the lap weight without being in front of the picker.

The machine indicates directly to the picker tender the amount over or under the standard, a feature which is adjustable to accommodate varying moisture regain rates. An illuminated dial and magnifying head permit dial reading from a great distance.

The operator tears the lap from the picker and rolls it a few inches out from under the loggerhead and into the waiting arms of the lap balance car, which has been positioned automatically to receive the lap. The operator then touches the start button, which energizes the machine and starts the automatic cycle.

The lap balance and lift arm raises the lap and checks the tolerance immediately so that any required picker adjustment can be made as quickly as possible. After checking weight tolerance, it places the lap automatically into the carrier. The car then locates automatically in front of the next picker to begin the cycle again.

American MonoRail Co., 13106 Athens Ave., Cleveland 7, Ohio.

Do you want more data? Write ◆ or use card on page 165; list A-101

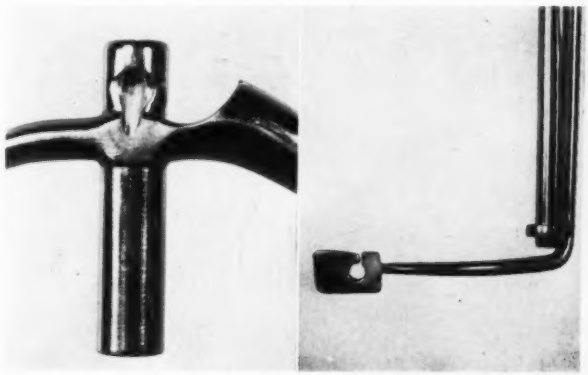
Sizing agent for Dacron ups loom output

A warp sizing agent, Acryson P-6, for filament Dacron provides unusually high loom efficiency and cloth quality at low cost. It can be applied with conventional sizing equipment; there is no scumming during application; shedding, flaking, or pick-off on loom parts is negligible; and hygroscopicity is low.

The compound is easily removed from grey goods by conventional scouring methods.

Rohm & Haas Co., 222 W. Washington Sq., Philadelphia 5, Pa.

Do you want more data? Write ◆ or use card on page 165; list A-102



Flyer builds denser roving bobbins

Rieter roving frame flyers are engineered to place more roving on the bobbin (up to 20%) with fewer ends down, and to prepare more even roving to support higher spinning drafts.

Other features of the flyer (suited for both cotton and synthetics) are:

(1) A coating of extra-durable heavy industrial chrome plating.

(2) A highly polished surface inside and outside.

(3) An accurate balance (at speeds specified by the customer) to give smooth turning and even lay of roving on the bobbin.

(4) A design which imparts a minimum of strain on the roving while it is in or on the flyer.

(5) A presser arm which is located beneath the hollow leg, insuring as little tension as possible to roving when changing direction.

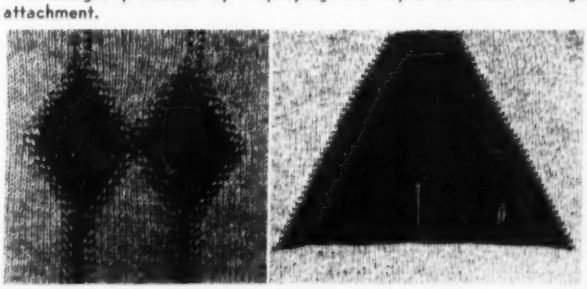
American Rieter Co., Inc., Passaic Ave. and Clinton Rd., West Caldwell, N. J.

Do you want more data? Write ◆ or use card on page 165; list A-103

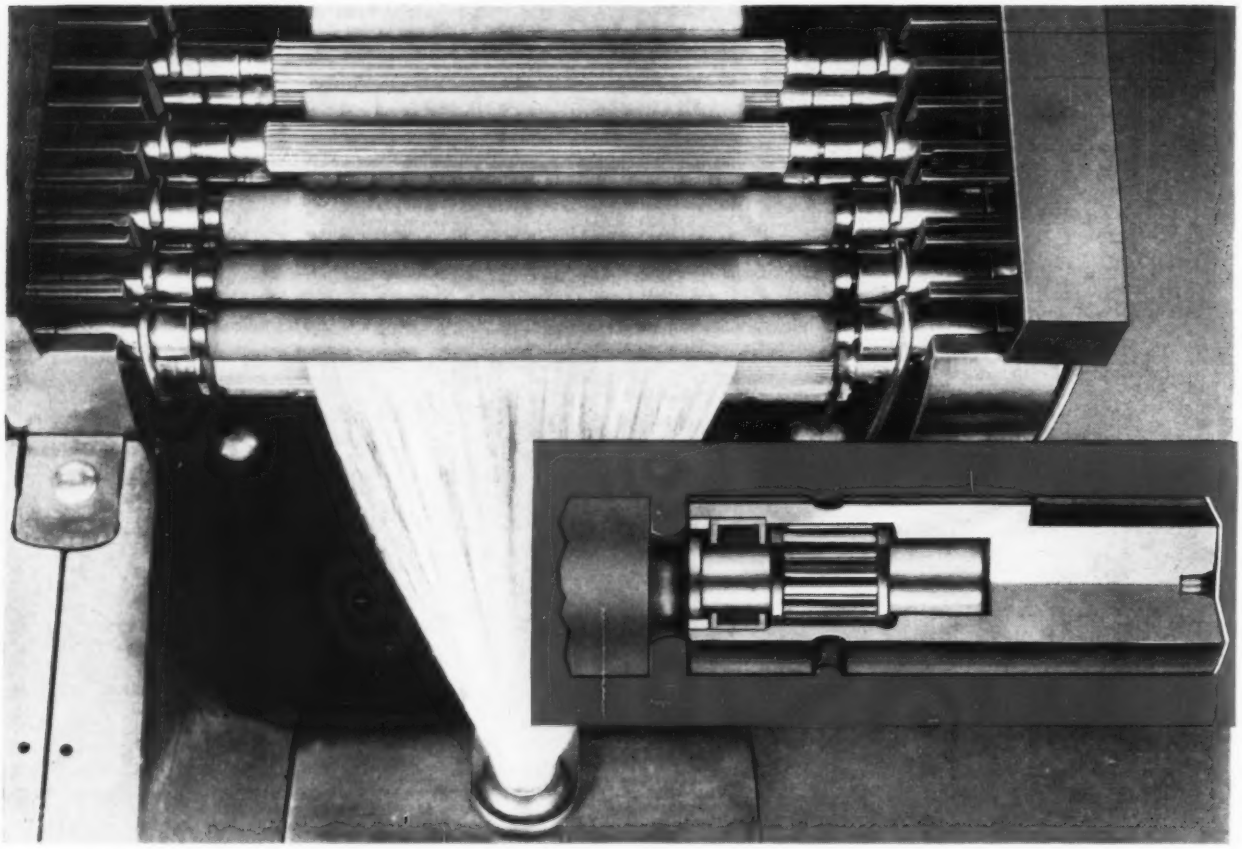
Inside selvage adds F-F knitting versatility

A special inside selvage attachment for intarsia on the standard Reading Full-Fashioned Outerwear Machine permits patterns to be knitted embodying various split ar-

Two designs produced by employing the improved inside selvage attachment.



How HYATTS help produce better textiles at lower cost:



DRAWING

TOP ROLLS EQUIPPED WITH HY-ROLLS ASSURE GREATER SLIVER UNIFORMITY

Let's take a look at textile quality from an angle that's often overlooked—the bearings your machinery turns on. Let's start with a drawing operation, because you've got to begin with uniform sliver to finish with good cloth. That means top rolls that turn *free and true*—a perennial problem with old-fashioned plain bearings that often bind or allow excessive play, but a cinch with precision-built HYATT Hy-Rolls! What's more, HYATTS prevent costly oil leaks, save up to 90% on lubrication and up to 40% on power. So insist on HYATT Hy-Rolls when you modernize or replace *any* textile machinery—*it pays big dividends in the long run!* Hyatt Bearings Division, General Motors Corporation, Harrison, N. J.

STANDARDIZE ON HYATTS FOR:

CARDS • DRAWING AND ROVING FRAMES • SPINNING FRAMES
LOOMS • DRY CANS • TENTER FRAMES • SHEARS • WASHERS
FULLING MILLS • TEXTILE MACHINERY MOTORS

THE RECOGNIZED LEADER IN CYLINDRICAL BEARINGS

GM FORWARD FROM FIFTY

HYATT HY-ROLL BEARINGS
FOR TEXTILE INDUSTRY

rangements, such as single-needle open and two-needle closed split. Using this procedure, merging lines between designs and main body fabrics become sharp and distinct because the method used is similar to that followed on hand knitting frames.

The attachment is readily adaptable to the production of irregular, or non-symmetrical, designs. It is recommended, however, that the two-needle closed split procedure be used when it is desired to knit such designs.

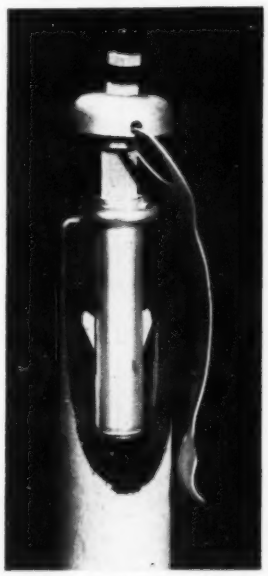
Perfect interlocking of loops is maintained by repositioning the selvage ends of the design yarns after the course is laid and while the actual loop formation takes place. This eliminates the customary overlapping of yarns that normally tends to destroy fabric elasticity. Use of this inside selvage attachment is particularly effective in straight line design knitting or for vertical patterning effects where it is not generally possible to obtain a sharply outlined design without sacrificing desirable elasticity.

Textile Machine Works, P. O. Box 1382, Reading, Pa.

Do you want more data? Write ◆ or use card on page 165; list A-104

Bobbin holder repels lint

A bobbin holder for spinning frame creels has been developed which will support all bobbins from 8" x 4" to 12" x 7", inclusive. The design of the positive type holder eliminates tripping and latching devices, and permits closure of the top of the holder to prevent lint accumulation.



The holder contains only two actuating parts — independently retractable holding fingers, which are spring-loaded, to center the roving bobbin and let off the roving concentrically. The holding fingers have been designed to exert a greater hold as the weight of the bobbin is increased; and it is impossible for a bobbin to become disengaged accidentally.

The unit is mounted on two hardened steel races with 8 chrome alloy steel balls. A convex dust shield deflects air currents downward, causing lint and dirt to be carried away from the bearing. The entire unit is corrosion-resistant, and covered with a dust cap in which there are two holes to support the brake. The brake can be added any time without removing the bobbin holder from the creel.

James Hunter, Inc., 745 Lowndes Hill Rd., Greenville, S. C.

Do you want more data? Write ◆ or use card on page 165; list A-105

Speeds setting doffer change gears

A tool which permits one man to set card change gears quickly and accurately is available. With the Doffer Change Gear Tool it is easy for one person to remove the barrow pulley, place the desired change gear on the tool

TC
TENNESSEE CORPORATION
HYDRO

SODIUM HYDROSULFITE
CONCENTRATED

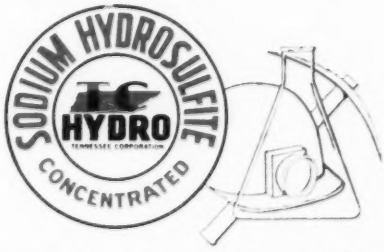
TC-HYDRO is a dry, white, free flowing, crystalline powder of uniform size and structure. It is dust free, assuring highest stability and uniformity.

AS MINERS OF SULFUR BEARING ORES

We have utilized our basic position in Sulfur Chemistry to produce another product of highest purity and quality for use in the textile industry.

WHEN YOU NEED IT—

Our production is located in the heart of the Southern Textile Industry which permits us to render over-night delivery service to most Southern points—also small lot shipments are available from centrally located warehouses.



Phone, Wire or Write for literature and test samples if desired.

TENNESSEE TC CORPORATION

617-629 Grant Building, Atlanta, Georgia

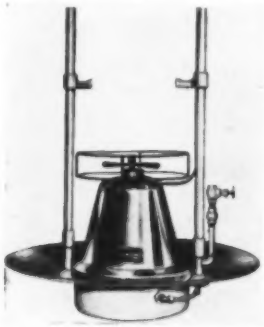
kit substitutes for the barrow pulley hub), slide the tool and gear onto the stud, adjust the change gear to the doffer gear, and tighten into place. The tool, machined to fit over the stud and to hold the gear, is ruggedly built and equipped with a knurled handle.

Saco-Lowell Shops, 60 Batterymarch St., Boston 10, Mass.

Do you want more data? Write ◂ or use card on page 165; list A-106

A packaged humidifier simple to install

A self-contained humidifier, the IH27-B, is a packaged unit for single or multiple installations, and is designed to meet all conditions of building construction so it can be quickly and easily installed. The inexpensive motor-driven unit will distribute horizontally up to 3 gallons of water per hour, and is supplied with controls.



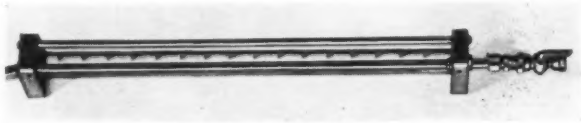
Water is fed to the basin of the humidifier through a float tank, which maintains a constant level of water. In this water dips the cone attached to the motor shaft. When the motor is started, the water travels up the cone outwardly under a disk also attached to and turning with the motor shaft. The water strikes grid vanes with enough force to break the mass into fog or mist.

The Standard Engineering Works, Pawtucket, R. I.

Do you want more data? Write ◂ or use card on page 165; list A-107

Destroys the collecting powers of dust

Two types of static elimination equipment (the Air Type Shockless Bar and the Neutrostat Air Gun), specifically designed for cleaning dust and dirt from textile materials, etc. (all types of surfaces to which the dust is being attracted and held electrostatically) simultaneously blows off the dirt and neutralizes the static charges on both the dirt and the part being cleaned.



The Air Type Shockless Bar.

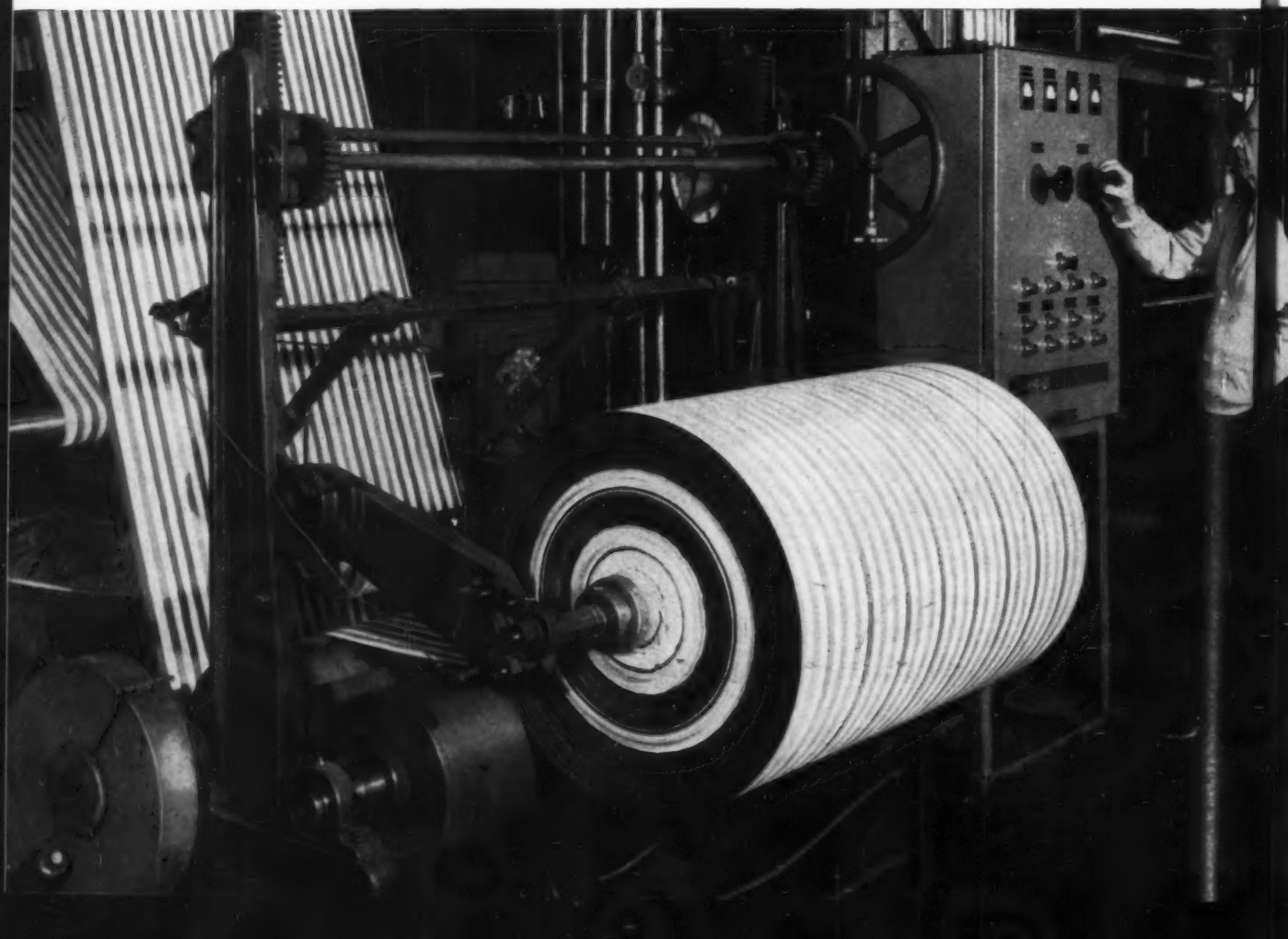
This action eliminates the electrostatic forces tending to reattract dust to the surfaces.

The Simco Co., 920 Walnut St., Lansdale, Pa.

Do you want more data? Write ◂ or use card on page 165; list A-108

Will give strength of single cotton fiber

A servo-electronic recording balance which measures forces from 25 to 250 milligrams in less than 0.030 second



can be used to weigh small objects or test the tensile strength of single cotton fibers. Called the Model 104, the balance provides an accuracy better than 1%; and offers four full scale readings which permit sensitivity to be switched from scale to scale during a run.

Franklin Electronics, Inc., Bridgeport, Pa.

Do you want more data? Write ◆ or use card on page 165; list A-109

A service to cut operating costs

A service designed to reduce the costs of electricity and gas purchases made by large and small businesses is available.

Each month clients forward their paid utility invoices to a central office. Once received, trained personnel record and check each bill for accuracy of calculations and proper application of rate schedule. This check starts with the meter readings and is carried through the intricate rate structure to the final total.

Thereafter, the records of the use of services at each location are carefully analyzed to determine whether or not changes to optional, available rate schedules would prove more economical. Further investigations are made into the possible applications of beneficial riders, rules, regulations, and clauses that are a part of these rates. These analyses can also detect increased charges that result from defective metering devices.

Reports are issued to clients advising them of their findings. Where over-charges are found or reductions are available, the service firm guides clients to the corrections and rate changes that subsequently reduce their costs.

There is no charge for this service unless costs are reduced. When costs are reduced, the fee is a percentage of the monthly amounts saved. The service firm's participation in these savings is limited to a specified period, after which their clients save the full amount of the reductions put into effect.

American Utility Cost Consultants, 15 Park Row, New York, N. Y.

Do you want more data? Write ◆ or use card on page 165; list A-110

Reads tensions on yarns difficult to reach

Yarn tension can be measured with the Saxl Tension Meter (with negligible contraction and deflection of the yarn), in spaces too limited for some meters, such as yarn and rubber strands in narrow fabric looms.

The meter is cocked to open the three-roller mechanism into which the yarn is threaded. Then the trigger is released, allowing the yarn deflection, caused by the center of the three rollers pressing the strand against the other two, to be amplified and indicated on a dial facing the

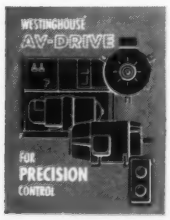
Westinghouse AV-DRIVE jumps tenter frame production 78%

Since installing a Westinghouse AV-Drive, Hampton Mills, Inc., East Hampton, Mass., reports they are now producing up to 160 yards of fabric per minute on their tenter frame. Formerly, machines were limited to 90 yards per minute.

AV-Drives have provided the precision speed control necessary to maintain specific tensions in this installation. They have also turned in a notable record for reduced maintenance and service.

Do you have an adjustable speed problem? Call your nearby Westinghouse representative Or, write Westinghouse Electric Corporation, 3 Gateway Center, P.O. Box 868, Pittsburgh 30, Pennsylvania.

J-22098



POWER-UP starts with CONTROL

YOU CAN BE SURE...IF IT'S Westinghouse

Finser
TAPERED TOP DRIVE
STEEL BLADE
SMALL WHORL DIAMETER AFFORDS REDUCTION IN CYLINDER SPEED
THIS FILLING SPINDLE
EQUIPPED WITH SKF- ROLLER BEARING -
STEEL BASE WITH RUST-RESISTANT FINISH
MEETS YOUR REQUIREMENTS - CUTS YOUR POWER COSTS

EXCLUSIVE U. S. SELLING AGENTS
WATSON & DESMOND
P. O. BOX 1954 CHARLOTTE, N. C.

operator. A transparent flywheel mounted on the pivot steadies the readings, thus giving smooth averaging of all practical conditions encountered.

Tensitron, Inc., Harvard Depot Rd., Harvard, Mass.

Do you want more data? Write ◆ or use card on page 165; list A-111

Bevels both tufted and woven carpets

A bevel edge machine developed for the tufted carpet industries is also suitable for finishing off the edges of conventional carpeting, squares, rugs, runners, and carpet patterns.

The machine is driven by a fractional horsepower electric motor operating a spiral cropping blade, which

works against an adjustable edger blade. The cutting head can be set to cut bevel edges of varying angles.

In trimming carpet squares, the material is placed on the floor, the edge being put under the adjustable holding down plate, and the machine drawn around the four sides of the carpet. When the machine is used for trimming samples, it usually is placed on a table and the samples fed through by hand.

British Tufting Machinery, Ltd., Whitebirk Drive, Blackburn, Lancs., England.

Do you want more data? Write ◆ or use card on page 165; list A-112

Additive preserves wool strength in dyeing

Celersel, an accelerator and dye bath assistant for use in the dyeing of wool and other animal fibers, aids in the production of higher quality wool in a much shorter dyeing time. With the process it is possible to apply chrome dyestuffs in half the time necessary with conventional dyeing methods.

The dyeing time is also proportionally reduced when dyeing with acid dyestuffs; and dyeings have the same fastness properties as those produced by conventional methods.

The addition of the compound to the bath has a noticeable and permanent swelling effect on the wool fibers, and it is this effect which produces the shorter dyeing times and more rapid metallization of the dye.

It acts as a buffer to prevent the harshening effect and loss of strength which is normally caused by the action of acids and chrome on the wool. Dyeings show an increase

in tensile strength in the fibers, compared to conventional methods. In dyeing blends the method provides better balance in time of dye absorption between the synthetic fibers and the wool.

Other advantages include: (1) better card roping; (2) less card waste; (3) higher spinning and weaving efficiency; (4) improved hand; (5) better appearance of the finished product; (6) increased production; (7) lower fuel costs; and (8) the possible use of lower grade blends.

M. Stanley Brown of New York has been appointed exclusive importer and marketing manager for the U.S.A. and Canada for the product and process.

Metro-Atlantic, Inc., 2072 Smith St., Centerdale 11, R. I.

Do you want more data? Write or use card on page 165; list A-113

Hydraulic-type power unit for web control

Web guide controls in the form of vacuum-piloted hydraulic-type power units are actuated either by the position of the web in the sensing head or by a four-way lever-operated manual valve during set-up or rethreading operations. For use in the cloth room or in wet process operations, the dual controls are made in four rated sizes depending on the shifting speed required and gross weight to be shifted.

The dual control is accomplished by a solenoid-operated directional valve which is built into the hydraulic pump. This valve directs the hydraulic flow to either of two outlet ports in the pump. One of these ports is connected to the automatic system, while the other connects with the manually operated four-way, closed center, valve.

Each of the systems is then connected to a hydraulically actuated shut-off valve and combination junction block where a single set of hydraulic lines connect both systems to the hydraulic power cylinder. The hydraulic pressure in the activated system automatically opens or closes the shut-off valve as required.

Fife Mfg. Co., Inc., P. O. Box 878, Oklahoma City, Okla.

Do you want more data? Write or use card on page 165; list A-114

Spinning-twisting ring for wool-Dacron

A new 5/16" face Conical Ring for spinning and twisting 6-oz wool and Dacron blends at high spindle speeds has a single oil reservoir for lubricating all bearing surfaces. Travelers are light and rigid to balance the light outward thrust of the yarn and prevent yarn breakage. The rings fit all standard frames.

Herr Mfg. Co., Inc., 320 Franklin St., Buffalo 2, N. Y.

Do you want more data? Write or use card on page 165; list A-115

Clean comber selvage guides easily

Comber draw box selvage guides which swing out of the operating position by a slight lifting motion of the hand are available. The guides are mounted on an adjustable stud screwed into the front top roll bearing assembly allowing them to be moved out of operating position for cleaning. Made of a hard compound to resist wear, they are available in five sizes to meet all requirements.

Saco-Lowell Shops, 60 Batterymarch St., Boston 10, Mass.

Do you want more data? Write or use card on page 165; list A-116

REBEL PRODUCTS

PRESENTS

"TURBAIRE"

"A Modern Aerodynamic Device for Controlling Card Waste—"

Also The New Concentri Card Screens

Condenser Screens
and
Metal Specialties

The Old Rebel Sez!

"You can't do good work without the best equipment, and everyone knows the best is made in DIXIE!!"

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In your regular issues of TEXTILE INDUSTRIES, each month you will find two posters. These contain manufacturing hints and employee reminders. Use them on your bulletin boards. Additional posters are available, free for the asking!

If you have specific problems you would like treated in these posters, write the editors. We're on the look-out for good ideas.

TEXTILE INDUSTRIES

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Five years development in the
Kali research laboratories
proven in selected leading mills

new

KAL-CO-SYN

an advanced sizing agent
for cotton and all
cotton and synthetic warps

Increases strength and
elongation of yarn

Reduces shedding of size

Scours out readily
and will not mildew

No change necessary
in your present formula

Run a comparative
trial at your mill.

Our technical staff is at your service.

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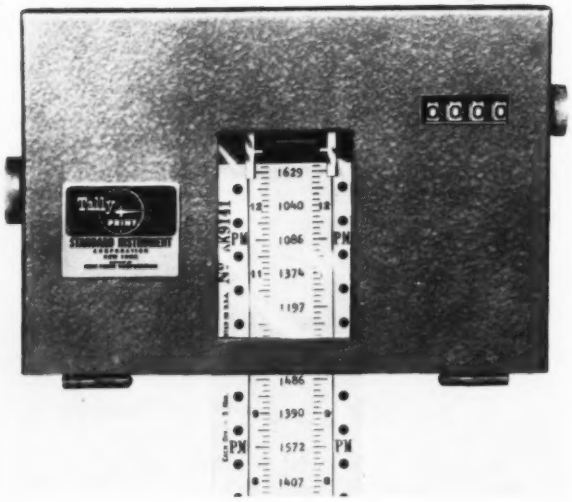


Monitors production, machine operation

Accurate print-out at predetermined intervals, of elapsed time or number of units produced, is feasible with Tally-Print.

It is electrically connected to the machine or process to be monitored. A chronologically marked chart roll is sprocket-driven through the instrument. At predetermined intervals, the total elapsed time or the total number of units monitored in that interval is printed on the tape. In addition, a visual cumulative total is provided for longer periods.

The instrument is adaptable for monitoring any production machinery, conveyor belt flow, office machines, etc. The data provided furnishes a basis for pinpointing production bottlenecks, analyzing tools, methods and personnel, accurate cost-accounting, and preventive maintenance.

Available in 5-digit or 4-digit printers, the unit has standard print-out intervals of 5, 15, 30 or 60 minutes, (special intervals can be supplied if desired) and will register up to 300 impulses a minute. It can be actuated by closure of external contacts.

It is manufactured in four models: Model A—Prints out number of units at given intervals; Model B—Prints out productive time or off-time of any machine or process; Model AR and Model BR—Total for each time interval obtained by automatic reset, which instantaneously resets to zero after each print-out.

Standard Instrument Corporation, 687 Broadway, New York 12, N. Y.

Do you want more data? Write ☁ or use card on page 165; list A-117

Tool "blows up" cots for easier mounting

A pneumatic cot mounting tool for use with Armstrong or similar type presses makes cot changing practically effortless, and in no way distorts the cots being pressed on.

The tool consists of a steel pusher with a threaded hole in one side. Into this hole a pipe nipple of 1½" length and ⅛" diameter is screwed. The plant compressed air supply is then hooked onto the fitting.

As the press is lowered onto the cot, the air pressure inside the pusher expands the cot until it slides onto the

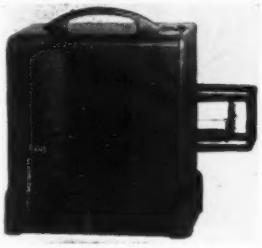
roll with little effort. The fixture is available in three diameters—25/32", 29/32", and 1 1/16".

Saco-Lowell Shops, 60 Batterymarch St., Boston 10, Mass.

Do you want more data? Write ◆ or use card on page 165; list A-118

Charts minute changes in humidity

An instrument called the Microhygrograph makes minute fluctuations in relative humidity visible by recording them on a 12" x 6" chart which covers a 24-hour period. Readings to less than 1% relative humidity are possible.



The instrument assures an accuracy of plus or minus 3% at all times, and has an operating range from 15% to 95% at temperatures from 32 F to 130 F.

Serdex, Inc., 91 Cambridge St., Boston 14, Mass.

Do you want more data? Write ◆ or use card on page 165; list A-119

Will magnify, project, photograph

Created for more economical inspection methods in research and quality control, the Projectina is a portable microscope, projector, comparator, and camera.

Micro pictures may be seen on an effective 7" ground glass screen and also through the eye piece, at a constant scale, without refocusing. Built-in illuminators allow for easy microscopy and projection in transmitted bright and dark-field as well as surface bright and dark-field. The light intensity is variable by finger-tip control.

Stationary stages for large specimens, mechanical stages with vernier reading of 1/10 mm, and high precision mechanical stages that permit the reading of 1/1000 mm on the measuring knob combine for added versatility and accuracy. The total range of vertical adjustment is sufficiently great to permit comparatively thick specimens as well as appropriate fixtures or accessories to be mounted on the stage.

Standard screens are offered in a choice of eight variations—from plant to vernier or angular reference lines. All screens interchange readily and always maintain exact magnification.

Alfred Hofmann & Co., 629-635 Fifty-Ninth St., West New York, N. J.

Do you want more data? Write ◆ or use card on page 165; list A-120

How much heat to burn one hole?

The Fabric Burn Hole Tester determines the resistance to heat of fabrics, plastics, etc. The unit consists of a small heat source, capable of being maintained at constant temperature, which can be made to impinge upon a sample which is held in a relaxed horizontal state.

Custom Scientific Instruments, Inc., 541 Devon St., Kearny, N. J.

Do you want more data? Write ◆ or use card on page 165; list A-121

Photo taken at Swanknit, Inc., Cohoes, N.Y.

Garment manufacturers like this one, caught between the trend toward rising rates on one hand . . . the need for competitive pricing on the other . . . have found that "Merrows" help them beat the squeeze because:

- Faster operating speeds increase production.
- Interchangeable parts permit use on variety of operations.
- Automatic lubrication minimizes maintenance.
- Rugged construction reduces "down time".

How "MERROWS" Help Beat the Cost Squeeze

We'll be glad to demonstrate the work of Merrow machines on your own material.

Write today outlining your overstitching, hemming, or shirring problems. See how "Merrows" can help you beat the cost squeeze.

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Travelers need it! Our rings have it!

You know — as we have known through 85 years experience — that only a small area is used as a bearing surface by the flying traveler. To this critical "INSIDE-UNDER" area, we really do impart near-perfection of form and finish. That's why DIAMOND FINISH flange rings give such superb traveler float at highest speeds.

WHITINSVILLE (MASS.) SPINNING RING CO.

DIAMOND FINISH

Makers of Spinning and Twister Rings since 1873

Rep. for the Carolinas & Va.: W. K. SHIRLEY, P.O. Box 406, Belmont, N. C.
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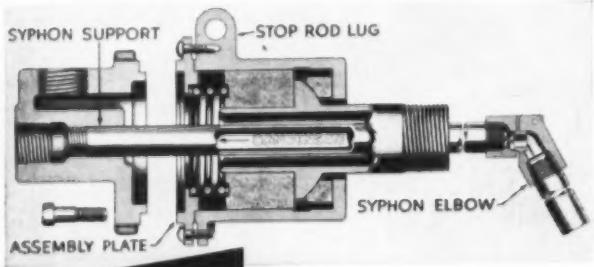
TRY THIS on your Dry Cans and 30" Slasher Cylinders

We'll gladly furnish a pair of these units for 90-day obligation-free trial in your mill. The Type SB2P is self-supporting, completely packless, needs no lubrication or adjustment. The Johnson Syphon Elbow permits the use of two straight pipes instead of an unwieldy curved syphon pipe, is hinged to pass right through the joint.



Johnson ROTARY PRESSURE Joints

First in the Textile Industry

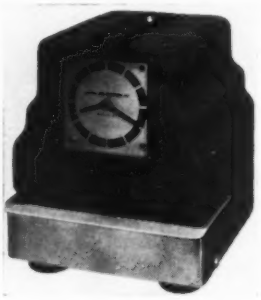
Write for Catalog S-3002

Shows self-supporting Johnson Joints for all needs . . . on print cans, Sanforizers, calenders, big 5' and 7' cotton slashers, dry cans, etc.

THE JOHNSON CORPORATION
815 Wood St., Three Rivers, Mich.

Equipment Briefs

Automatic time stamps, numberers, and daters can be equipped to print the year, month, date, a.m. and p.m., hour and minute (seconds or tenths of a minute, when required). Time and date advance automatically. Upper and lower die plates can be furnished on any model of stamp or numbering machine to print words or symbols. A six-sided word roll can be installed in place of an upper die plate when more flexible wording is needed. Among the innovations is a feature which enables thin forms to be recorded on the same machine; another feature enables the operator to make registrations exactly where desired to prevent overprinting.



Lathem Time Recorder Co., 76 Third St., N.W., Atlanta, Ga.

Do you want more data? Write Supplier or use card on page 165; list A-201

Magnetic holders which attach themselves to iron or steel surfaces, thus eliminating drilling of holes for mounting brackets and haphazard clamping arrangements, are extremely handy for holding brackets, indicators, magnifying glasses, flashlights, oil and air lines, blueprints or tags, retrieving parts, etc. Two types are available. One is a magnetic base only with a sturdy bolt and wing nut. The other has a ball and socket action and double adjusting arms.

Trico Fuse Manufacturing Co., 2948 N. 5th St., Milwaukee 12, Wis.

Do you want more data? Write Supplier or use card on page 165; list A-202

A sealed gear pump for mounting on any machine which requires fluid circulation for lubrication or other purposes, is available in two models: the Uni-directional, in which fluid flow reverses when shaft rotation reverses; and the Reversible, in which fluid flow is always in the same direction regardless of shaft rotation.

Bijur Lubricating Corp., 151 W. Passaic Ave., Rochelle Park, N. J.

Do you want more data? Write Supplier or use card on page 165; list A-203

An electronic metal detector assures exceptional stability of the electronic circuit, and eliminates need for constant observation and frequent adjustment. The "Twin Loop" metal detector can be installed on any conveyor system handling non-magnetic materials, and will detect tiny metal particles at speeds from 30 to 600 feet per minute. Control circuits can be set to trigger a warning light or other signal, or to actuate a reject mechanism that will divert contaminated products.

Stearns Magnetic Products, 635 South 28th St., Milwaukee 46, Wis.

Do you want more data? Write Supplier or use card on page 165; list A-204

A portable beam scale for general use in industry, and known as the Model "57", has a capacity of 1000 pounds. Four types of beam are available—single beam, single beam with drop lever, double beam, and full capacity "DU-AL" beam.

Howe Scale Co., Rutland, Vt.

Do you want more data? Write Supplier or use card on page 165; list A-205

A level control for the detection of liquid, solid, and

slurry levels, the Model CL-10 Dynatrol has a positive acting electrical output control signal that varies with the amount of immersion of a vibrating paddle in the medium being detected. The output signal can be used to control the operation of any type of electrical equipment.

Automation Products, Inc., 3030 Max Roy Street, Houston 24, Tex.

Do you want more data? Write Supplier or use card on page 165; list A-206

A **pair of two-circuit limit switches** that are compact in size and have high electrical capacities includes a roller-plunger-actuated switch and a (push or in-line) plunger-actuated switch. The roller-plunger switch (designated 5LSI), which is especially effective for cam or slide operations, can be rotated 90 degrees from the switch cover plate. The plunger actuated switch (designated 2LSI) offers a full ¼ inch of overtravel. Both are completely sealed and are highly resistant to abuse and wear.

Minneapolis-Honeywell Regulator Co., Micro-Switch Division, Chicago & Spring Sts., Freeport, Ill.

Do you want more data? Write Supplier or use card on page 165; list A-207

Designed to temper outside air and supply it in sufficient quantities to eliminate negative pressures, the Air Make-Up Unit supplements the normal heating system by relieving the infiltration heat load. The unit replaces exhausted air with clean, fresh, pre-heated air. With the proper balance of supply and exhaust negative pressures are equalized. This unit may, with standard accessories, be used as a unit heater, or as a source of filtered air.

Aerovent Fan Company, Inc., Piqua, Ohio.

Do you want more data? Write Supplier or use card on page 165; list A-208

A **synchronous induction motor** (called the Syncro-Spede) accelerates as an induction motor but runs at exact synchronous speed. Because of its size it can provide precise frequency systems in small generator ratings. As a conveyor drive, the motor makes it possible to have an exact constant-speed or adjustable-speed system from no-load to full-load conditions with a minimum of driving units and controls—unaffected by voltage fluctuations.

Louis Allis Co., Dept. P, 427 E. Stewart St., Milwaukee 1, Wis.

Do you want more data? Write Supplier or use card on page 165; list A-209

A **limit switch** that can be replaced on the job in a few seconds with no required adjustments, called the "Plug-In Limit," is a long-life precision limit switch which allows immediate replacement. The unit consists of two parts: a terminal block enclosure, containing wiring connections; and a switch enclosure, including all moving mechanical and electrical parts. To make a complete replacement of the switching unit, it is necessary only to loosen two screws, pull off the switch, plug on the replacement unit, and tighten the screws.

Minneapolis-Honeywell Regulator Co., Micro-Switch Division, Chicago & Spring Sts., Freeport, Ill.

Do you want more data? Write Supplier or use card on page 165; list A-210

A **lift stacker** for handling rolled materials aids in solving the problem of measuring, rerolling, and stacking such materials as leather belting, paper, cloth, etc. The battery-electric, hydraulic-lift Grand Lift Stacker handles roll sizes from 14" to 30" wide and up to 60" in diameter. A

Kemp Singeing Head in Action

Increase singeing speeds 75% and more . . .

Come to Kemp

Kemp Radiant-Flame Compression Singeing equipment can speed up your operation from 75% to 100%. . . drastically reduce costs for labor, maintenance, and fuel . . . and still turn out a *better product!*

Kemp singeing is a high-speed operation, ideal for modern fabrics. Material travels over burners in a split second; is brushed by a solid mass of flame for a closer, more even singe. The unique Kemp *pre-mix* concept . . . the mixing of oxygen and fuel gas *before* ignition . . . eliminates excess oxygen in the combustion chamber formed by the burner head and rapidly traveling material. Thus, the nap is not burned, but *carbonized* and carried away by escaping combustion gases. The resulting singe is cleaner, faster, and cheaper.

Your Kemp Representative will gladly give you full information and recommendations to speed up your operation. Call him, or write us for Bulletin 6-A. The C. M. Kemp Mfg. Co., 405 E. Oliver St., Baltimore 2, Md.

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Moropol 700

The Finest Polyethylene Emulsion on the Market

for crush resistants
wash and wear formulations
shrink control finishes

Moropol 700 is non-yellowing—increases tear and tensile strength and seam efficiency in resin treated fabrics—improves crease recovery and hand. Moropol 700 is 100% effective—contains no waxes or loading agents.

Write today for full information and samples.

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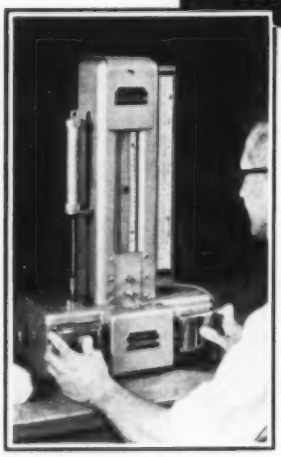
NEW The Automated MICRONAIRE



- Speeds up checking two to three times.
- Provides a quick, easy, accurate and authorative measure of fiber fineness.
- Indicates the quality and value of the cotton.
- Indicates the dyeing properties.
- Measures the maturity of cotton.
- Predicts the spin-ability of cotton.
- Forecasts the appearance of the yarn and cloth by indicating the number of neps to be expected.

For NEW Book "Advantages and World-Wide use of the Micronaire in all segments of the Cotton and Textile Industries"
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measuring device indicates how much material has been rerolled from the stock roll. Cutting is simplified as material is held at work level height. After cutting, this portable lift can be moved to the shipping dock and the roll of material can be loaded directly into a truck. The stacker has a lift capacity of 4000 lb, a maximum lift height of 54", and a minimum lift height of 18".

Grand Specialties Co., 3101 West Grand Ave., Chicago, Ill.

Do you want more data? Write Supplier or use card on page 165; list A-211

A steel strapping tool, the B5 Stretcher, provides faster easier tensioning of steel strapping. This tool is precision balanced so that strap can be applied with ease from any direction, and is available in a light, medium or heavy duty model. The three models together are engineered to be used with every strap size from ¼" x .010" to ¾" x .035". The B5 allows strap to be fed from a coil overhead, behind, or in front of the operator.

Acme Steel Co., 135th St. & Perry Ave., Chicago 27, Ill.

Do you want more data? Write Supplier or use card on page 165; list A-212

A spectacle loop called the 3 D 3 Opticaid offers high magnifying power at a comfortable working distance for inspecting production output, precision parts, and examining delicate operations, all at convenient arms length with both hands free to work—magnifies 3 times and has separate lenses for each eye. Provision is made to add prescription lenses when necessary.

Edroy Products Co., 480 Lexington Ave., New York, N. Y.

Do you want more data? Write Supplier or use card on page 165; list A-213

A fiber glass air filter utilizing die-cut chipboard grillework is known as the Glasfloss Safety-Grille filter. The product is particularly suited for industrial applications because of its safety advantage. The filter is available in all popular standard sizes for heating, air-conditioning, and ventilating applications.

Pittsburgh Plate Glass Co., Public Relations Dept., 632 Fort Duquesne Blvd., Pittsburgh 22, Pa.

Do you want more data? Write Supplier or use card on page 165; list A-214

A portable air compressor called the Port-O-Glo is a single cylinder piston type compressor mounted on a 3-gallon tank and driven by a ⅓ hp motor. The machine will produce 100 psi for such purposes as tire inflation, paint spraying, cleaning, and operation of air driven tools and cylinders and other compressed air requirements — furnished with 2-wheel portable mounting.

Emglo Products Corp., Johnston, Pa.

Do you want more data? Write Supplier or use card on page 165; list A-215

A practical wheel mounted crane with adjustable height, the Magic-Pole Universal Gantry, has variable tread width for easy passage down narrow aisles and through small doorways. Another feature is an ultra-light, high strength aluminum alloy I-Beam, which permits easier and safer handling due to greatly reduced weight and top-heaviness.

B. E. Wallace Products Co., Exton 32, Pa.

Do you want more data? Write Supplier or use card on page 165; list A-216

A walk-behind power sweeper, compact and maneuverable, sweeps a 32-inch path and is especially suited for congested areas. The machine's chief feature is its high-powered vacuum system which boosts dirt pickup and cuts dust nuisance to a minimum. A main brush follows floor contours and has a pressure adjustment for heavy soilage areas; and a variable sweeping speed (0-3 mph) allows extra-clean sweeping. The machine (called the Model 40) is powered by a 1-cylinder, 4 hp air-cooled engine.

G. H. Tennant Co., 721 N. Lilac Drive, Minneapolis 22, Minn.

Do you want more data? Write Supplier or use card on page 165; list A-217

Low-voltage power equipment features: quick-make manual closure; closed-door draw-out operation; sub-assembly breaker construction, permitting easier, faster parts replacement; four-high stacking of 600 ampere frame size; semi-flush pull-down handle; stored-energy electrical closure that sharply cuts secondary circuit requirements; and greatly increases accessibility for operation and servicing.

I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Philadelphia, Pa.

Do you want more data? Write Supplier or use card on page 165; list A-218

A sewing machine for decorative stitching, the Model 100-LS Giant-Saddle-Stitch, makes a large stitch fully one-quarter inch long, a stitch which can be sewn with all types of stitching and embroidery threads and yarns, and can be applied to all types of materials. The stitches may be placed close together or apart by a simple adjustment on the machine to provide the best-looking stitch for the garment.

Columbia Sewing Machine Corp., 315 West 35th St., New York 1, N. Y.

Do you want more data? Write Supplier or use card on page 165; list A-219

A textile drive can be adapted to meet each mill's specific drive requirements, yet is made up entirely of standard "off the shelf" components. Standard totally enclosed pressure lubricated gear reducers, and either air or mechanical clutches in suitable standard sizes, are selected and combined with pulleys and belt transfer devices to make a custom engineered unit. These units are currently offered in sizes up to 40 horsepower.

Layton-Greenfield, Inc., P. O. Box 986, Coatesville, Pa.

Do you want more data? Write Supplier or use card on page 165; list A-220

A general purpose industrial tape resistant to moisture and many acids, alkalis, and solvents ("Scotch" brand "Paklon" film tape No. 681) is a printable, transparent, pressure sensitive tape with a backing inert to oils, alcohols, aliphatic hydrocarbons, and most alkalis and concentrated and dilute acids. With an adhesion of 40 ounces per inch of width (ASTM), the tape has the excellent holding and sealing properties needed for light to medium industrial packaging uses.

Minnesota Mining and Manufacturing Co., 900 Bush St., St. Paul 6, Minn.

Do you want more data? Write Supplier or use card on page 165; list A-221

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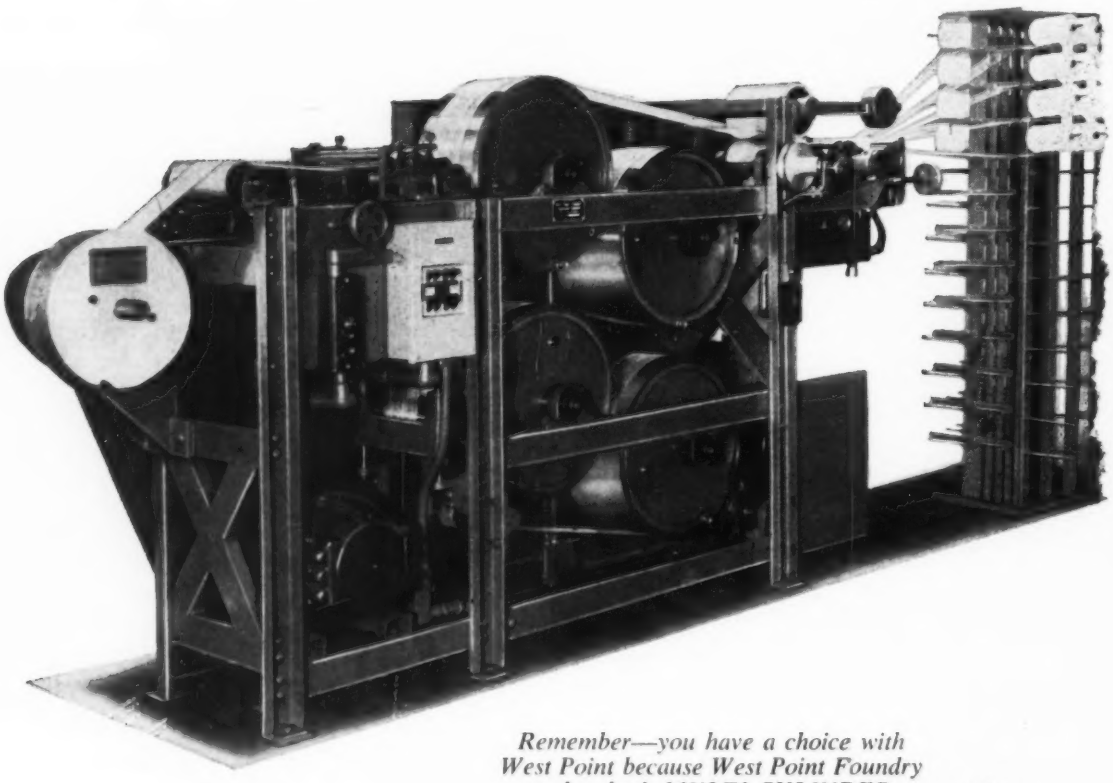

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1-11 STEP-UP SIZING EFFICIENCY. Booklet describes laboratory and field service designed to help increase sizing efficiency. E. F. Houghton & Co., 240 W. Somerset St., Philadelphia, Pa.

1-12 THE STORY OF LATEX. Booklet describes origin, history and uses of latex. Includes list of industrial applications. General Latex and Chemical Corp., 666 Main St., Cambridge 39, Mass.

1-13 NEW CARD DRIVES. Economical, inexpensive card drives help modernize card room, save on maintenance. Bulletin #6100, T. B. Wood's Sons Co., Chambersburg, Pa.

1-14 GIVE SYNTHETICS GREATER ABSORBENCY. Booklet, "Fabulous Facts and Fabulizing," tells hosiery, piece goods, and clothing manufacturers applications, profit potential and marketing arrangements of Fabulized process. Fabulized, Inc., 518 S. Delaware Ave., Philadelphia 47, Pa.

1-15 HOT PIPE INSULATION. Folder contains sequence photographs and diagrammatic drawings of Z-crete Underground Hot Pipe Insulation. Brochure Z-1, Z-Crete Div., Zonolite Co., 135 S. LaSalle St., Chicago 3, Illinois.

1-16 YARN LUBRICANT. Data sheets describe Fibergard EF 313, a white cream used for stock lubricant; warp sizing, softener, binder and lubricant; and cone winding lubricant. Harry Miller Corp., 4th and Bristol St., Philadelphia 40, Pa.

1-17 BEARING UNITS. Illustrates and describes new line of bearing units, consisting of pillow blocks and flange blocks. Catalog BU-101, Browning Mfg. Co., Maysville, Ky.

1-18 WORM GEARING. Describes line of worm gearing, supplied in individually matched sets and providing high-load capacity on small center distances. Made by Michigan Tool Co. Write Denham & Co., 925 Book Bldg., Detroit 26, Michigan.

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R-18 Coilers and Conversions — Describes new complete coilers and conversions for cards. Southern States Equipment Corp., Hampton, Ga.

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R-239 Draper Repair Parts Catalog—Contains illustrations covering all mechanisms and construction with complete listings. Draper Corporation, Hopedale, Mass.

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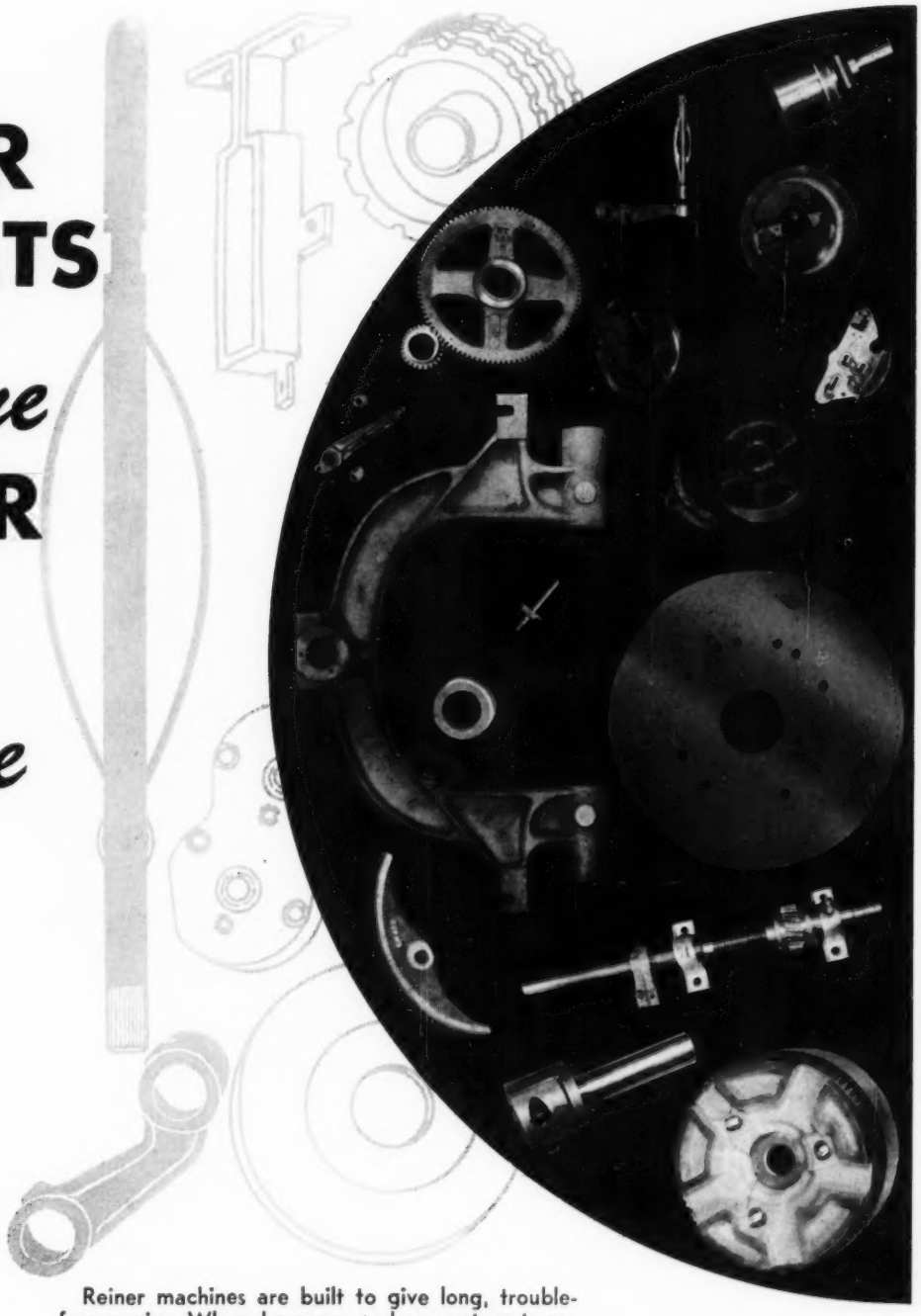

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R-249 Slash 450 FPM—Slasher drive controls located 20 feet away, gives up to 25% more production. Bulletin 4-2311, Reliance Electric & Engineering, Dept. 208A, Cleveland 10, Ohio.

KNITTING

R-301 Singlehead Full-Fashioned Machine — Literature on request from the Wildman Jacquard Mfg. Co., Full Fashioned Div., Norristown, Pa.

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R-426 Industrial Oil — Catalogs on Industrial Oil and Fatty Acid products. Swift & Company, Industrial Oil Dept., 1800 165th St., Hammond, Indiana.

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R-428 Chemical Catalog — Lists products with chemical composition, properties and applications. Antara Chemicals Div., General Aniline & Film Corp., 435 Hudson St., New York 14, New York.

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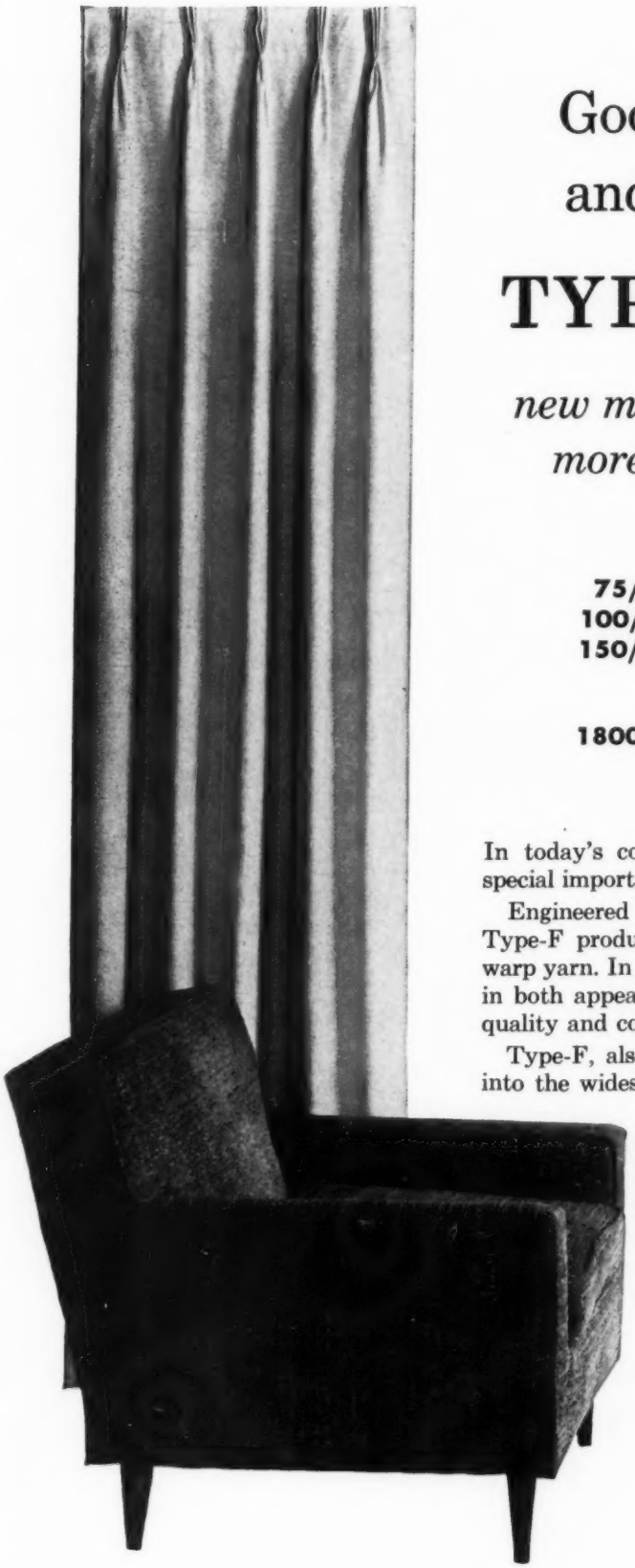

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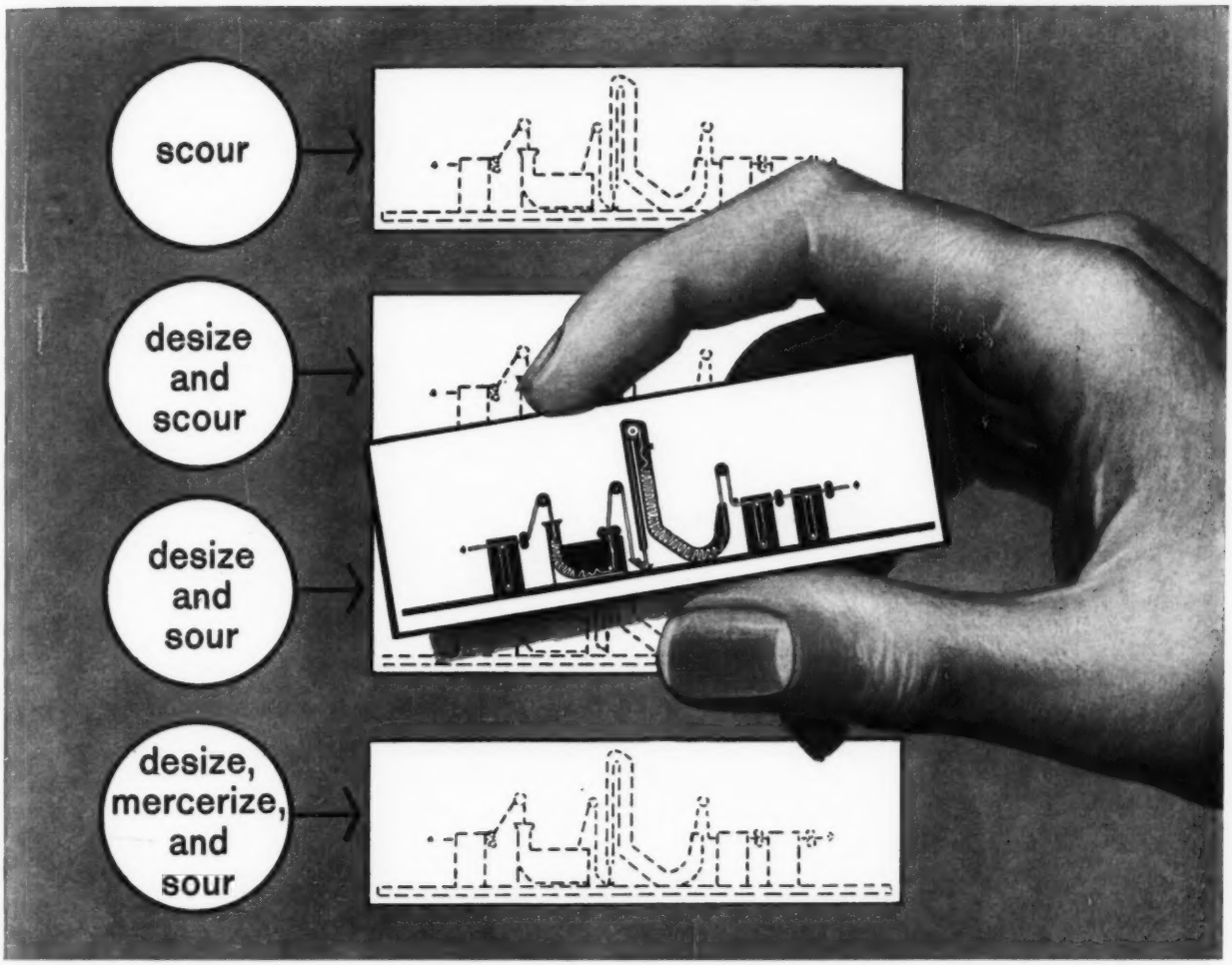

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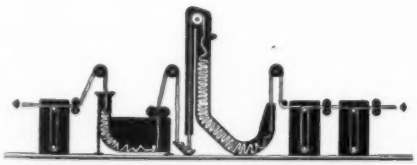

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R-603 Shadograph Weighing Devices —Pictures and information on various types of scales. Exact Weight Scales Co., Columbus 8, Ohio.

R-604 Evenness Tester—Details on taking the guess out of quality control. Uster Corp., 2516 Wilkinson Blvd., Charlotte, N. C.

R-606 Strobotac — Measures speed of rotating, reciprocating or other cyclic motions. General Radio Co., 275 Massachusetts Ave., Cambridge 39, Mass.

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R-705 The Wonalancet Way — Deals with current problems in Textiles. Wonalancet Company, 128 Burke St., Nashua, N. H.

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R-801 Textile Brushes — Describes complete line of brushes for all departments of mill. S. A. Felton & Son Co., Manchester, N. H.

R-802 Belt Lacing Equipment — Includes prices, specifications, etc. Clipper Belt Lacer Co., Grand Rapids, Michigan.

R-804 "Motor Selector." — How to select a-c motors for specific application. Bulletin B-2103. Reliance Electric & Engineering Co., 24701 Euclid Ave., Cleveland 17, Ohio.

R-805 Everything For Floor Care — Describes scrubbing, waxing, polishing and mopping equipment as well as waxes, sealers, and cleansers. Finnell System, Inc., Dept. TI, 1300 East St., Elkhart, Ind.

R-806 Rotary Pressure Joints—Details on self-lubricating, self-adjusting, self-aligning joints. The Johnson Corp., Three Rivers, Mich.

R-807 Servicing "One-Shot" Lubricators—Describes high capacity spring discharge piston pump lubricator. Bijur Lubricating Corp., 151 W. Passaic St., Rochelle Park, N. J.

R-809 Wrap Up Lint Problems—Automatic lint filters remove lint from air, winds it into desposable roll. Bulletin 234, American Air Filter Co., 275 Central Ave., Louisville 8, Ky.

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R-812 Mechanical Power Transmission — Includes drawings, dimension, weights, prices, application. Dodge Mfg. Corp., Mishawaka, Indiana.

R-816 Leather Belting — Selection, installation, proper maintenance. Atlanta Belting Co., 508-510 Whitehall St., S. W., Atlanta, Ga.

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R-823 Roller Bearings For Textiles —How roller bearings are employed for more profitable textile production. Hyatt Bearings Div., General Motors Corp., Harrison, N. J.

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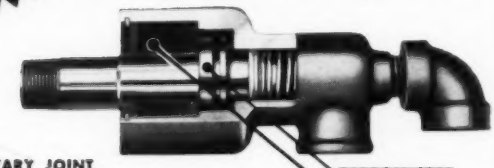

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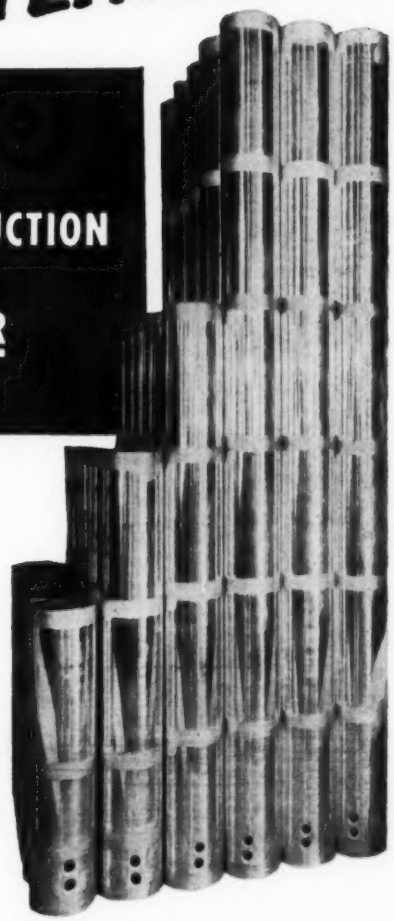

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R-843 For Static Elimination — Eliminates static safely, simply and inexpensively. Simco Co., 980 Walnut St. Lansdale, Pa.

R-845 Cut Costs With Moyno Pumps — Describes "progressing cavity" pumps for mercerizing and sizing. Bulletin 30-TI, Robbins & Myers, Inc., Springfield, Ohio.

R-847 Lubricants For Textiles — Working samples of bearing lubricants, spindle oils, etc. Georgia-Carolina Oil Co., Box 101, Macon, Ga.

R-850 New Lubricated Plug Valves—Semi-steel and steel lubricated plug line. The William Powell Co., 2525 Spring Grove Ave., Cincinnati 22, Ohio.

R-851 "Tank Talk"—Shows various types of elevated steel tanks. R. D. Cole Manufacturing Co., Newnan, Ga.

R-852 Cotton Mill Equipment — Traces pictorially the steps in processing raw cotton into finished cloth. Westinghouse Electric Corp., 511 Wood St., Pittsburgh 30, Pa.

R-853 Micro Switch Bulletin—Catalog of products includes prices, applications, etc. Micro Switch Div., Minneapolis-Honeywell Regulator Co. Freeport, Ill.

R-854 Roller Bearings For Textiles—How roller bearings can help production. Hyatt Bearings Div., General Motors Corp., Harrison, N. J.

R-855 Unit Heater — Data on the Herman Nelson horizontal and vertical units. American Air Filter Co., Inc., 215 Central Ave., Louisville, Ky.

R-856 Stainless Steel For Textiles—Applications and advantages of stainless textile equipment. Allegheny-Ludlum Steel Corp., Dept. TI-93, Oliver Bldg., Pittsburgh 22, Pa.

R-857 Finnell Combination Scrubber-Vac—Illustrated literature gives complete specifications and describes various methods of combination-machine-scrubbing, including method recommended for cleaning oily floors.—Finnel Systems, Inc., 1300 East St., Elkhart, Indiana.

R-861 "Vari-Pitch" Sheave Bulletin —Control by means of pitch diameter adjustment described. Allis-Chalmers Mfg. Co., Milwaukee 1, Wis.

R-863 Penetrating Wood Finish — Describes floor seals for textiles. E. I. Du Pont De Nemours & Co., Inc., Finishes Div., Wilmington, Del.

R-864 Certified Climate Air-Changer System — Describes use with direct humidification for partial or complete air conditioning. Parks-Cramer Co., Fitchburg, Mass.

R-868 Ridge Tool Prices—Capacities and weights included along with pictures. Ridge Tool Co., Elyria, Ohio.

R-869 Stainless Steel Fabrication — Information on ventilating and drying, slasher exhaust, and materials handling in stainless. Sims Metal Works, West Point, Ga.

R-872 Metal Conveyor Belts — Illustrates entire range of manufacture. Ashworth Bros., Inc., Metal Products Div., Fall River, Mass.

R-873 Rihco Humidifiers And Cooling Systems—Describes new atomizers to lessen air consumption in evaporative cooling systems. Aldrich Machine Works, P. O. Box 750, Atlanta, Ga.

R-874 Dynac Brake Motors—Electrical braking of a-c motors-roving, spinning, knitting. Westinghouse Electric Corp., Pittsburgh, Pa.

R-875 Textile Applications For "Scotch" Tape—Some good ideas on using "Scotch." Minnesota Mining & Mfg. Co., St. Paul 6, Minn.

MATERIALS HANDLING

R-901 Casters And Wheels—Casters and wheels for all applications. Darnell Corp., Ltd., 12000 Woodruff Ave., Downey, Calif.

R-902 Canvas Baskets — Complete line for textile use. W. T. Lane & Brothers, Poughkeepsie, N. Y.

R-903 Overhead Handling Equipment — Shows successful applications of monorail systems. American Monorail Co., 13106 Athens Ave., Cleveland 7, Ohio.

R-905 Conveyor Key Book—How to step-up production with modern conveying. Logan Co., 1115 Franklin St., Louisville, Ky.

R-906 How To Select A Lift Truck—Excellent means for price comparison between similar trucks. Hyster Co., 2902 N.E. Clackamas St., Portland 8, Oregon.

R-907 Corrugated Containers — Describes Multi-Unit and Bulk Container. Gaylord Container Corp., 111 N. 4th St., St. Louis 2, Mo.

R-909 Tramrail Engineering And Application — Data on how Tramrail Equipment can cut handling costs. Cleveland Tramrail Div., Cleveland Crane and Engineering Co., 1036 East 289th St., Wickliffe, Ohio.

R-910 How To Specify Packaging — Regulations on shipment, how to determine which package to use. Hinde & Dauch, Sandusky, Ohio.

R-911 New Lift Trucks—Shows latest trends in lift truck design. Hyster Co., 2902 N.E. Clackamas St., Portland 8, Oregon.

R-912 Materials Handling For Textiles—Shows how fibre trucks can increase efficiency, protect products. National Vulcanized Fibre Co., Wilmington 99, Del.

R-913 Continuous Power Conveyor—Complete information on Zig-Zag Conveyor. Richards-Wilcox Mfg. Co., Aurora, Ill.

R-914 Stresses On Overhead Tracks —Covers track peening, discusses stresses. Cleveland Tramrail Div., Cleveland Crane & Engineering Co., Wickliffe, Ohio.

R-915 Scientific Materials Handling —Describes various materials handling devices, includes pictures. Bennett Rose Co., Box 8, Roebuck, S. C.

R-916 Overhead Materials Handling —Treats twin fan ceiling cleaners and shock proof electrification as well. Louden Machinery Co., Fairfield, Iowa.

R-917 Little Packaging Library — Series of booklets covers the business of shipping in corrugated boxes. Hinde & Dauch, Sandusky, Ohio.

R-919 Improved Materials Handling —"Materials in Motion" describes use of fibre containers. National Vulcanized Fibre Co., 1056 Beech St., Wilmington, Del.

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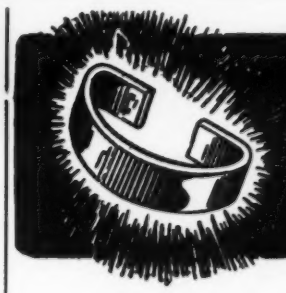

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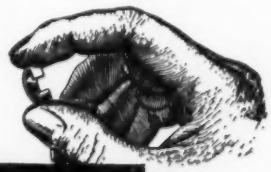

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Personal NOTES ABOUT MEN YOU KNOW

(Continued from page 46)

in Dublin and Milledgeville in Georgia, and in Rockingham, N. C. * * * **Robert T. Stevens,** president, was recently honored by the Protestant Council of the City of New York for his work on behalf of religion in American life. He shared honors with evangelist Billy Graham and Roger Hull, vice-president of the New York Mutual Life Insurance Co.

James McGibbon, formerly chemist at Kenyon (R. I.) Piece Dye Works, is now chief chemist at Poughkeepsie Finishing Corp., Paterson, N. J.

The A. French Textile School, Georgia Institute of Technology, Atlanta, Ga., has received as a gift from **Harry Purvis,** Lumite Division, Chicopee Mills, Cornelia, Ga., his textile library consisting of 200 titles on textile subjects.

Newly elected president of Roxboro (N. C.) Cotton Mills is **James A. Long, Jr.,** formerly vice-president in charge of sales. Mr. Long succeeds R. L. Harris who has been elected chairman.

A $500 student loan fund has been contributed by **John C. Roberts,** president of Textiles, Inc., Gastonia, N. C., and recent president of the N. C. Textile Manufacturers Association, to the School of Textiles at N. C. State College. The fund will be administered by the school's Textile scholarship committee, headed by **G. H. Dunlap,** who is also director of textile student affairs. * * * **Thomas Craig Smith** recently assumed his new duties with the company at the Myrtle plant as assistant superintendent. He was an overseer at Victory-Winget before being appointed to his present position.

Soon to be named director of the Business and Defense Services Administration, Commerce Department, is **A. Henry Thurston,** acting chief of the textile and clothing division.

John F. Heaton was recently promoted from supervisor in the finishing department of Union Bleachery, Greenville, S. C., to general supervisor in charge of all Sanforized finishing. He has been employed with the firm for 31 years, and has been a supervisor since 1944.

Miss Leona Bell has retired as secretary at the American Cotton Manufacturers Institute, Charlotte, N. C., after 30 years of service in the southern textile industry. Miss Bell was secretary to W. M. McLaurine and the late W. P. Jacobs in the ACMA, and Robert C. Jackson and F. Sadler Love in the ACMI. She plans to take another position in January.

New president of the Greater Charlotte (N. C.) Textile Club is **Don E. Hamilton,** of Charlotte, president of the Comer Machinery Co., who succeeds David R. Johnston, president of Johnston Mills Co. **James D. Barbee,** Burlington Industries, is first vice-president; and **Herbert Woodward,** Southeastern Factors, second vice-president.

Newly appointed vice-chairman of the Georgia-Alabama Textile Traffic Association is **Robert Train,** president of Bibb Manufacturing Co., Macon, Ga., and chairman of the Cotton Manufacturers Association of Georgia's Traffic Committee. **R. W. Harrell,** traffic manager of West Point (Ga.) Manufacturing Co., has been named chairman of the traffic association's board.

Harold W. Leitch of Andover has been elected president of the board of directors of the Lowell Technological Institute Research Foundation. Other officers chosen for the coming year are **Barnett D. Gordon,** president, M.K.M. Hosiery Mills, vice-president; **John H. Pearson,** Pearson and Pearson, treasurer; **Dorrance H. Goodwin,** secretary and executive director of the Foundation. Voted to the executive committee were **Kenneth E. Bell,** Mirror Lake, N. H., chairman; **Dr. Chapin A. Harris,** professor in charge of the fibers and yarns department, LTI; Mr. Leitch; **Dr. Martin J. Lydon,** LTI president; and **Leo Linden,** Warwick Mills.

Paul G. Krueger is now vice-president and general manager and Alden R. Well, treasurer of Plymouth (Mass.) Cordage Co.

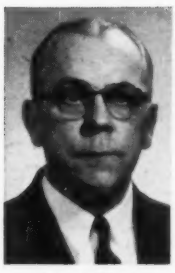
Keene R. Hasenyager has been appointed by the P. H. Hanes Knitting Co. as director of marketing research. Mr. Hasenyager resigned a post as vice-president of Market Research Corp. of America to accept the new post in which he will consolidate into one department all Hanes' former activities in the field of market research.

Mr. Traylor

Mr. Catchings

Mr. Slaughter

Callaway Mills Company



Mr. Tillery

Mr. Harris

Mr. Smith

West Point Manufacturing Company

At Callaway Mills Co., LaGrange, Ga., promotions in sales, production, and product development departments have been made as follows: At the Calumet Mill, **Harry Lifrage,** assistant product development supervisor was promoted to supervisor of the department; **Vance Sanders** from plant engineer to sales assistant; and **Jack Sloan** has been named plant engineer. **James P. Trotter,** formerly in the Calumet Mill sales office has been named sales assistant at Hillside Mill, and **Charlie Farmer** has been made assistant overseer of carpet sewing at Hillside. * * * **W. A. "Doc" Doyle** recently retired as cloth room overseer from Milstead following 41 years of continuous employment with the company. * * * **Nat G. Slaughter, Jr.,** has assumed his new duties as assistant comptroller of the company. **James L. Catchings** has been promoted from assistant superintendent to superintendent of Unity Spinning, succeeding Mr. Slaughter; **James Traylor** from draftsman at Hillcrest Maintenance to overseer synthetics at the Valway plant.

Lee Tillery, former manager of the Fairfax Division, West Point (Ga.) Manufacturing Co., has been elevated to the newly-created post of vice-president in charge of operations. He is succeeded as manager by **George A. Harris** who had been assistant manager of the division. **Robert E. Smith,** formerly manager of the towel division, has been named assistant to Mr. Harris. Two new executive vice-presidential posts are now filled by former vice-president **T. Scott Avary,** in charge of finance, and **Herman D. Ruhm, Jr.,** in charge of sales. **Henry Keller, Jr.,** formerly manager of the tax and insurance department, has been named to the post of assistant treasurer.

George Englehardt, formerly superintendent of Jean Ribbon Mills, Paterson, N. J., is now affiliated with Colonial Silk Mills in Paterson.

Recently elected president of Dorman Mills, Parsons, W. Va., is **Hubert B. Lake,** formerly secretary

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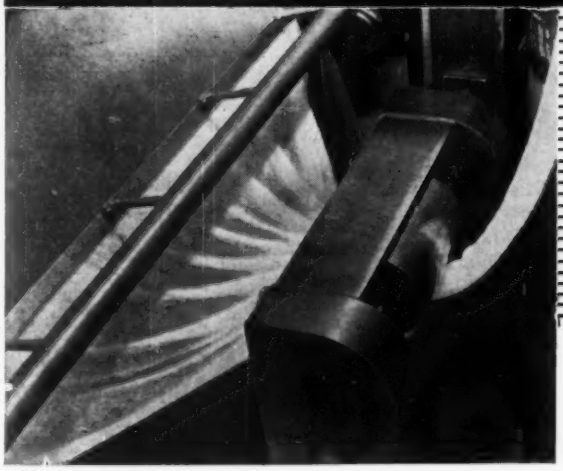

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Personal NOTES ABOUT MEN YOU KNOW

and trustee for the estate of the late president, Franklin W. Dorman. **Mrs. Franklin W. Dorman,** widow of the president, was elected to the board, and **A. Frank Little,** plant superintendent was elected a vice-president. **R. L. Gutman,** treasurer, was elected secretary-treasurer. **Theodore Dorman,** former vice-president and a director, resigned from both posts.

At Dundee Mills, Inc., Griffin, Ga., **Joseph W. Brady** is now senior vice-president and general sales manager; **Floyd C. Newton, Jr.,** vice-president and treasurer; **John H. Cheatham, Jr.** vice-president - sales administration; and **John T. Newton** vice-president - production.

At the Duplan Corp., Winston-Salem, N. C., two executives have been promoted to head new departments. **M. E. Lance,** formerly quality supervisor, order and planning supervisor, and manager of production, is now manager of the technical service department, and **William S. Wheeler,** formerly in charge of the sales service department, has been named director of product research and development. The new department which Mr. Lance heads will provide technical aid to knitters who use the yarn processed by the company and will also oversee production standards and quality.

George W. Hammer, Jr. has become associated with Erwin Mills, Inc., Durham, N. C., in the capacity of assistant director of personnel and industrial relations. Mr. Hammer was formerly associated with Burlington Industries in Greensboro, N. C. * * * **Charles C. Frye, Sr.,** has been named superintendent of the Stonewall division. Mr. Frye was formerly with Dan River Mills, Danville, Va., where he was engaged in the manufacture of various kinds of textile fabrics.

Cleveland L. Adams, head of the school of textile technology at Alabama Polytechnic Institute, Auburn, Ala., has been named president of the National Council for Textile Education. Other officers elected are: vice-president, **Dr. J. H. Dillon,** director of the Textile Research Institute, Princeton, N. J.; secretary, **R. K. Flege,** head, department of textile engineering, Texas Technological College, Lubbock; and treasurer, **Edward T. Pickard,** Textile Research Institute, Kent, Conn.

OBITUARIES

Dr. Romolo Armenante, 64, president of Paterson (N. J.) Bleachery.

Percy A. Bainton, 83, retired superintendent of the Weybosset Mills of the American Woolen Co., Providence, R. I.

Earl B. Brearley, 64, in charge of the dyeing department of Jantzen, Inc., Portland, Ore.

Sylvester V. Cottrell, salesman for National Aniline Division, Allied Chemical & Dye Corp., New York, N. Y.

Joseph A. Gnoss, 93, former superintendent of the Sauquoit Silk Mill, Scranton, Pa.

Louis Hamburger, 89, retired vice-president of L. Bachmann & Co., now Bachmann Uxbridge division of Amerace Corp., Uxbridge, Mass.

Frederick Hardler, 74, president and treasurer of the Binghamton (N.Y.) Knitting Co.

E. O. Jennings, 75, retired yarn salesman for Aberfoyle Manufacturing Co., Philadelphia, Pa.

Charles W. Kessel, 69, salesman for Hargo Woolen Mills, Keene, N. H.

Arthur Lee, 84, retired export manager of the William Carter Co., Needham Heights, Mass.

Jack Levine, 58, president of Denley Knitting Mills, Brooklyn, N. Y.

Wm. Randolph McCreary, 56, chemist for the J. S. Young Co. Clementon, N. J.

Richard C. O'Brien, 63, senior partner in the firm Richard C. O'Brien, yarn sales agent, Boston, Mass., and also president and treasurer of Palmetto Worsted Mills, Laurens, S. C.

George E. Repass, 79, retired Draper Corp. inventor, Boston, Mass.

Philip R. Sang, founder and general manager of College Knitting Mills, Buffalo, N. Y.

Frank B. Shuler, 72, partner in Shuler & Benninghofen Woolen Mills, Hamilton, Ohio.

Lawrence A. Stead, Sr., 73, former general manager of all operations of Aberfoyle Manufacturing Co., Philadelphia, Pa.

Mrs. Mabel Wallace Susskind, president of Clifton Yarn Mills, Clifton Heights, Pa.

John A. Swanson, general manager of Dundee Mills, Griffin, Ga.

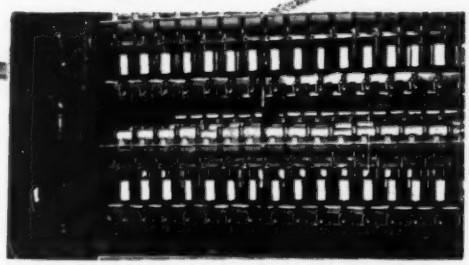
Earl L. Townsend, 60, vice-president and production manager of U. S. Textile Machine Corp., Scranton, Pa.

William Vanderber, 60, retired owner of the Plainfield (N. J.) Knitting Mills.

Edward R. Woolley, 50, owner of the Edward R. Woolley Textile Co., Phillipsdale, R. I.

TON-TEX SPINNER BELTS

Standard on Twisters and Doublers since 1926



Lapless Endless — Factory made to your size without a lap.

Roll Stock — For splicing endless on your machines. Complete Ton-Tex vulcanizing system available, including portable vulcanizing plate, tools and cements.

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1% Accuracy for any range from 30 to 100,000 RPM or surface speed. Antimagnetic durable mechanism. Efficient repair service at moderate charges.

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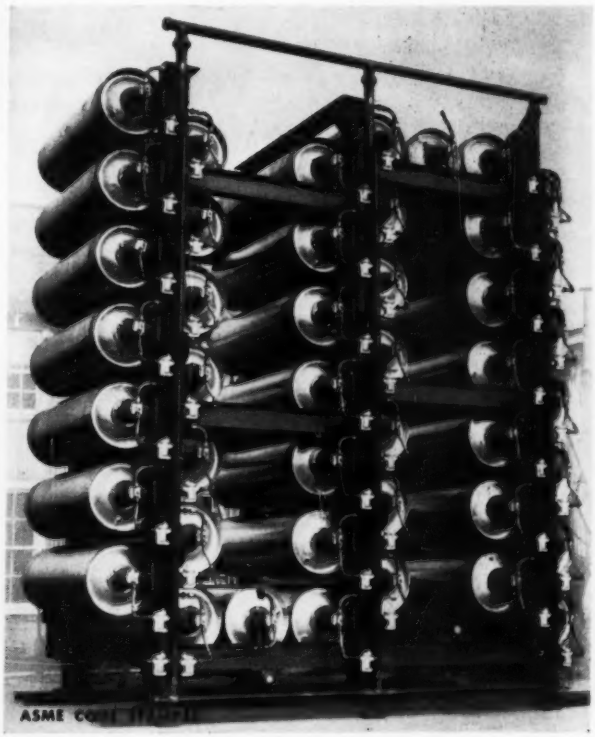
PROVEN SUPERIOR

In actual day to day operation where the real worth of machinery is tested, Sims new Stainless Steel 75 psi reversed dished head 44 Dry Cans are proven superior. They require less horsepower . . . are easier on bearings . . . and save floor space with no loss in drying surface. And, *exclusive* with Sims, this is the only Dryer where the chain drive is on one side of the can, while the steam fittings are on the other side . . . permitting maintenance of the drive without time lost waiting for steam pipes to cool.

Furnished Teflon-coated if desired.



Fabricated and installed at Lanett Bleachery and Dye Works, Lanett, Alabama by Sims Metal Works.

FOR ECONOMY AND QUALITY

Our modern and progressive metal-working shops, our skilled craftsmen, our know-how—these are guarantees of quality. For custom tailoring of stainless steel, call, wire, or write *now*.

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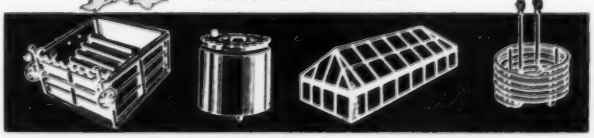
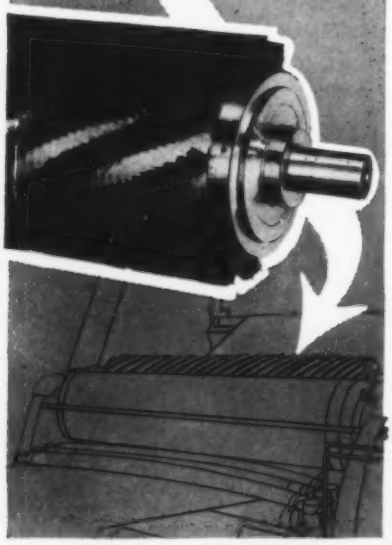
WEST POINT, GEORGIA

FABRICATORS SINCE 1928



WHY JENKINS' METLKOR® BRUSHES are on JAMES HUNTER SQUEEZE ROLLS



A JAMES HUNTER SQUEEZE ROLL WITH JENKINS' METLKOR BRUSH

James Hunter Machine Co., North Adams, Mass., wanted a brush to stand up when removing acidified flock from their Carbonizer Squeeze Rolls. Jenkins' engineers designed a METLKOR brush with exposed metal parts of stainless steel and bristle of acid-resistant Nylon.

Mr. Frank B. Morrill, Chief Engineer, James Hunter Machine Co., says: ". . . we have been using Jenkins' brushes for flock removal on our Squeeze Rolls for years . . . they do a much better cleaning job than the brush previously used, and stand up several times longer . . ."

This top textile machinery manufacturer has proven the efficiency of Jenkins' METLKOR — the cylinder brush that lasts many times longer and can be re-bristled! If you have any standard or special brush problem, write us today.

Specify Jenkins' METLKOR
the original . . . the best Metal-Core Brush

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CYLINDER BRUSHES
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Serving Industry for 80 Years
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What the TEXTILE MILLS are doing

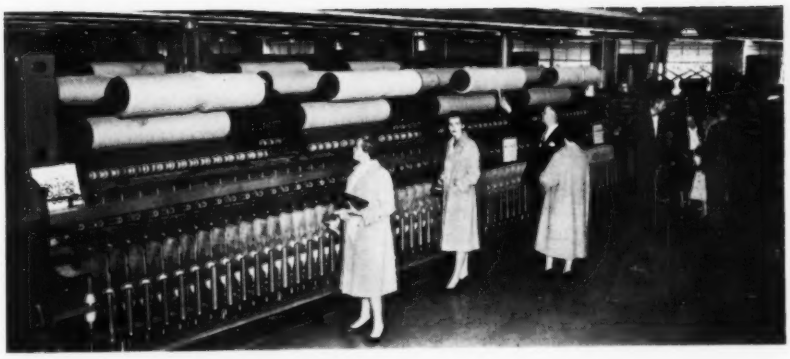
A new organization, **Graham Mfg. Co.,** is building a 200,000 sq ft building in Laurens, S. C., to house fancy wool weaving operations. The operation will employ about 500 people.

"Adverse conditions in the textile industry" have led **Hendor Mills, Inc.,** Paterson, N. J., to announce plans to cease operations. The firm dyes tricot fabrics.

A separate new department for knitting ladies' bulky knit Ban-Lon sweaters is now in full operation at **Shelley Knitting Mills, Inc.,** Philadelphia, Pa. A 6500 sq ft section of the knitting department at 1215 Glenwood Ave. is now devoted exclusively to turning out upward of 500 sweaters a week. Shelley has also installed a flat bed steamer. A Plexiglas partition erected around the knitting department separates it from the remainder of the block-long, single floor, 100,000 sq ft plant.

Waldrich Co., Delawanna, N. J., has purchased some of the dyeing and finishing equipment of the closed Richmond (Va.) Piece Dye Works. The equipment, including a complete resin finishing range, will be used along with a recently acquired compressive shrinkage range to enable the firm to devote 50% of its output to plain dyeing, the other 50% will remain printed fabrics.

TOP PHOTO—Knitting machinery being placed in operating position in the knitting department, which is completely enclosed in Plexiglas, BOTTOM PHOTO.



Part of the 1200 people visiting the Draper Bros. Co. plant are shown examining new spinning frames.

Courtesy Davis & Furber Machine Co.

The new yarn mill of **Draper Brothers Co.** (which last year celebrated its 100th anniversary) at Norton, Mass., recently was thrown open for inspection by employees and their families. More than 1200 visitors made the tour.

The first Southworth Scholarships to be awarded by **Jefferson (Ga.) Mills** have been given to Howard Crow and "Doc" Berryman. The scholarships are to Southern Technical Institute for a two-year course in Textile Technology, and are in the amount of $2000 per man. Jefferson will advance the amount; the recipients will repay it over a five year period at $400 per year. The fifth payment will be forgiven if the recipients return to Jefferson Mills and work for four years after graduating.

North Carolina Governor Luther Hodges delivered the principal speech at the ceremonies dedicating the new multi-million-dollar **A. & M. Karagheusian, Inc.,** plant at Aberdeen, N. C., recently.

To be promoted along with its thermal underwear, **Munsingwear, Inc.,** Minneapolis, Minn., has introduced a thermal sock. The leg is honeycombed with small air-trapping pockets to give it warmth.

At Chester, Ill., Prim Hosiery, Inc., a division of **Wayne Knitting Mills,** has moved its dyeing operations to a new location across the street from the former plant.

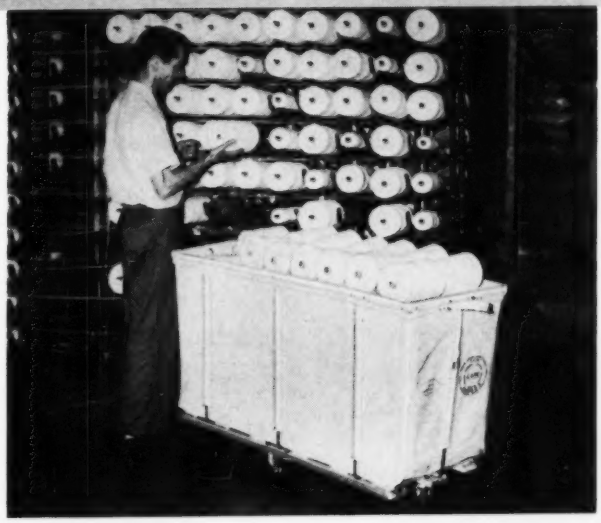
In Rockville, Conn., **Quality Knitting Mills,** a new producer of tubular knitted fabrics of cotton and synthetics, has begun operations.

The new location of **Rosemont Knitting Mills, Inc.,** Philadelphia, Pa., is 1011 Diamond St. With the added floor space of the new location, the firm expects to increase its production by 75%.

Riegel Textile Corp., Trion, Ga., has installed beam dyeing equipment. * * * Conference Leadership courses are under way at Trion to train individuals in the art of con-

for the best in CANVAS roving trucks

LOOK FOR Lane



Designed especially for running in narrow aisles, between machines, any tight place—*only* this Lane Style 28 Roving Truck incorporates *all* these quality features for *long, dependable service at very low cost.*

- Sturdy, strong-stitched body of Lane-woven duck—either plain or plasticized.
- Scuff-proof leather rim to protect against wear.
- Lightweight, extra-strong, spring-steel frame with rugged, flexible hardwood bottom.
- Oversize casters for easy handling of *any* load.

STANDARD SIZES AVAILABLE

No.	Length	Width	Depth
9	36"	20"	26"
12	48"	20"	26"
14	48"	24"	26"

Lane canvas baskets, hampers, and trucks are *built to take it, built to last!* There are other canvas baskets, but there's only *one* Lane. Always look for the Lane mark—to be sure!

See your distributor or write . . .

Canvas Basket Craftsmen Since 1894

Lane

W. T. Lane & Bros., Inc., Poughkeepsie, New York

ducting effective conferences or group discussion. The training course is being conducted by J. H. Groves, Assistant Director of Industrial Education, Georgia Institute of Technology. * * * Grey Mill employees recently were given a certificate of appreciation for having completed a million man-hours without a lost-time accident.

The Coosa and Thatcher plants of **Standard-Coosa-Thatcher Co.**, Chattanooga, Tenn., have installed the latest in automatic spoolers.

The purchasing department, main office, and all phases of production of **Schlegel Mfg. Co.** are located now at 1555 Jefferson Rd., Rochester 23, N. Y.

Woonsocket (R. I.) Spinning Co. a short time ago celebrated its 50th anniversary. The firm produces cashmere, lamb's wool, fur blends, and other woolen system yarns for knitting and weaving.

Cadet Major John B. Fortin of Decatur, Ga., (center) commanding officer of North Carolina State College's famed Pershing rifles Drill Team, examines 200 yards of red worsted gabardine presented to the college's School of Textiles by John Morgan (left), manager of the Raeford, N. C. plant of PACIFIC MILLS where the cloth was made, and Tom Tolar of Halifax, Va., president of Burlington Industries Pacific Mills. The cloth will be made into special uniforms for the State College Army ROTC drill team.

Wilma Hosiery Mill (formerly Spruce Maid Hosiery Mill) at Spruce Pine, N. C., is adding 25 knitting machines to its present 46 machines.

Dan River Mills, Inc., has announced plans to sell its remaining 250 village houses to its employees.

The former Lincolnsfield Mills, Lincoln, Me., will be operated by a new company, **Barnes Lincoln Co.**, for manufacturing fancy worsteds.

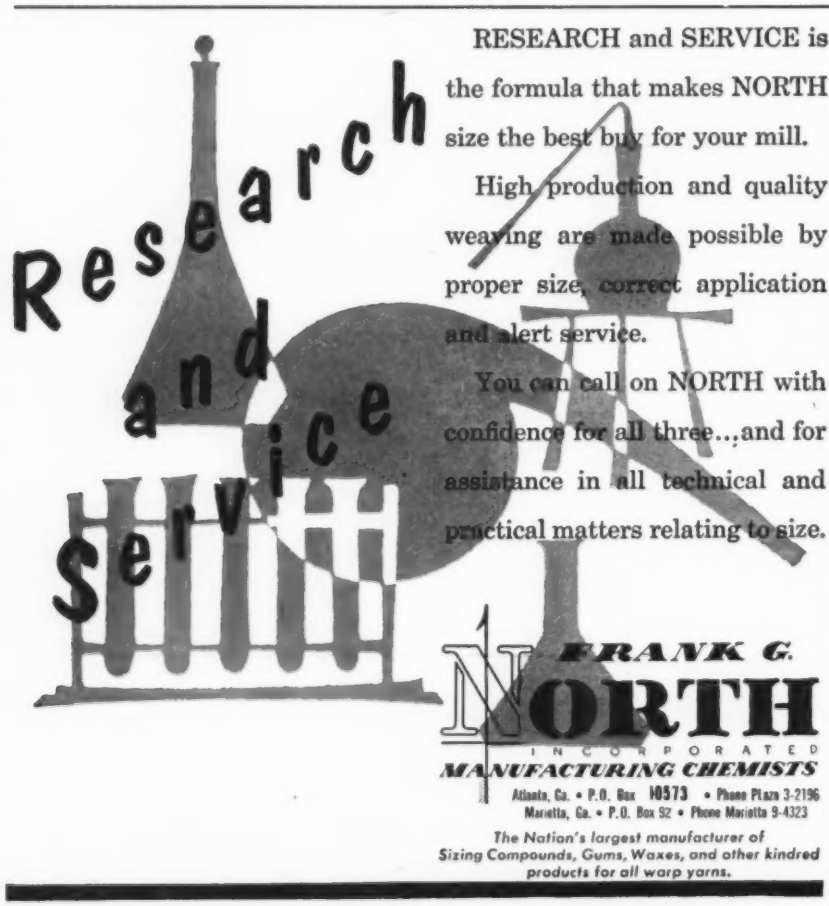
A new garment enterprise has been formed in Darlington, S. C., and is called **Consolidated Knitting Mills.**

The corporate name of Fairy Silk Mills, Inc., Shillington, Pa., has been changed to **Fairy Mills, Inc.**

Piecemeal liquidation of the machinery and equipment at the Richmond division of **Fair Lawn-Richmond (Va.) Finishing Co.**, located at 301 Hull St., was announced by John F. Evans, president of the company. This plant contained complete dyeing and finishing equipment for synthetic piece goods of all kinds up to 70 inches in width.

Upon completion of present orders the remaining plant of **Abbott Worsted Co.**, Seneca, S. C., will cease operations. Although definite plans have not been completed, efforts are being made to utilize the buildings to provide employment for the community.

A nylon seine, made by the Drummondsville division of **Dominion Textile Co.**, Montreal, Canada, has an area of 324,000 sq ft. The seine is in use off the coast of Peru.



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The Nation's largest manufacturer of Sizing Compounds, Gums, Waxes, and other kindred products for all warp yarns.

The Carter Fabrics Division of **J. P. Stevens & Co., Inc.,** recently donated to the Department of Knitting Technology, in the School of Textiles at North Carolina State College, a warp knitting machine for use in instruction and research. The machine is a 24-gauge raschel with full equipment, and is especially suited for the manufacture of lace and net type fabrics from both natural and synthetic yarns. * * * Stevens plans to increase production at the Utica-Mohawk plant, Clemson, S. C., by 30% over a two-year period.

The production facilities of the former Marian Mills, Allentown, Pa., have been acquired by **Technical Textile Co.** to expand its production in plastic and synthetics fabrics.

United Merchants and Manufacturers, Inc., is seeking registration with the SEC of $500,000 worth of interest in its employees stock purchase plan for the year 1958, and also for 75,000 shares of common stock for issuance under the plan. Raising funds is not the prime reason for the move.

Since salesmen and buyers persisted in referring to Wunda Parquet (carpeting line name) as "Park," **Wunda Weve Carpet Co.,** Greenville, S. C., has changed the name of the line to Wunda Park. Rolls in 15′ widths are now included in the array.

Woodside Mills, Inc., Greenville, S. C., which last year made a donation of $20,000 to Furman University, has of late made an additional gift of $30,000 to the Furman University Expansion Program.

In Watsontown, Pa., P. E. Walder has acquired sole ownership of Summit Throwing Co., the name of which has been changed to **Walder Textiles, Inc.**

Some 325 officials and employees recently assembled for a barbecue to dedicate a renovated 30,000 sq ft building on King St. to be used by **Georgia Tufters, Inc.,** Calhoun, Ga., in the manufacture of chenille batb mats and scatter rugs.

The citizenry of Tifton, Ga., set aside the week of November 4-9 to honor the town's newest industry—Peerless Woolen Mills, a member of **Burlington Industries, Inc.** Highlights of this year's celebration included county-wide school contests for posters, themes, and dressmaking; a major display erected in downtown Tifton showing something of the work done by Peerless; special decorations and displays in store windows; special programs at civic clubs; public tours of the mill; and a banquet at which John L. Hutcheson, Jr., Rossville, Ga., board chairman of Peerless, spoke. * * * B. I. Cotton Mills has been established in Greenville, S. C., to operate the Ely & Walker and Martel-Henrietta groups of mills. Combined, the two groups represent 14 plants with approximately 584,000 spindles and 14,600 looms. * * * The Goodall-Sanford plant at Hot Springs, N. C., has been transferred to the operational control of Raeford (N. C.) Worsted, and will produce yarns for use in Raeford fabrics.

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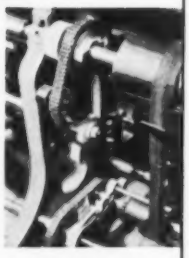

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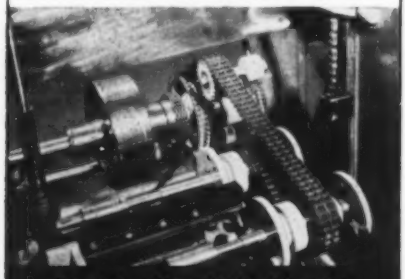

Precision Gear & Machine Co.
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SUPPLIERS News

WHAT THEY ARE DOING

Allis-Chalmers Manufacturing Co. announces personnel changes in the Mid-Atlantic region as follows: C. W. Parker, Jr., manager of the Richmond district since 1955, has been appointed manager of the Philadelphia district succeeding A. D. Brown, who has been transferred to the regional office staff. J. M. Mathews, since 1948 manager of the Charleston district, has been named successor to Mr. Parker as manager of the Richmond district. Gordon Hood, a former sales representative in the Baltimore district, has been appointed manager of the Charleston district, succeeding Mr. Mathews.

W. H. Oswald has been elected vice-president of the **Alvey Conveyor Manufacturing Co.** Mr. Oswald has been with the company for 34 years.

In Greensboro, N. C., **American Paper Products Co.** is now occupying its new 27,000 sq ft building which is located on a five-acre tract on Pleasant Garden Road, a mile south of the city limits.

The **American Textile Machinery Association** has elected two new officials to fill vacancies. F. Gorham Brigham, Jr., treasurer of Saco-Lowell Shops, was named treasurer, succeeding Samuel F. Rockwell, president-treasurer of Davis & Furber Machine Co., who resigned as treasurer of ATMA for reasons of health after serving continuously in the office since the association's founding in 1933. J. H. Bolton, Jr., vice-president and director of sales, Whitin Machine Works, was named chairman of the exhibition committee. Former chairman was W. K. Child, vice-president Draper Corp., who is now vice-president of ATMA.

The retirement of Keith Powlison as vice-president and secretary of the **Armstrong Cork Co.** has been announced. Mr. Powlison has been associated with the company for 25 years. Election of a successor to the office of secretary was deferred, and in the meantime, Albert H. Sheaffer, assistant secretary, was appointed acting secretary.

William B. Thomas, formerly general manager of Broadnax (Va.) Mills, has joined the Spartanburg, S. C., office of **Barnes Textile Associates,** a division of Scovell, Wellington & Co., in the capacity of a senior engineer, specializing in the technical aspects of textile manufacturing.

The **Bryant Chemical Corp.** has announced the appointment to its research and development staff of Dr. Robert Weiss who was formerly head of the research and development laboratory of the textile products division of Masury Young & Co. Dr. Weiss' headquarters will be the firm's laboratory at Hingham, Mass.

At the fall business meeting of the **Carolina Yarn Association,** Henry Stokes of Cosby & Thomas, was elevated to president; James Rogers of John L. Stickley Co., vice-president; Thomas Smotherman of American & Efird Mills, secretary; Wm. M. Barnhardt of Barnhardt Bros., treasurer. In a newly-created position, past president Frank P. Barrie of Universal Winding Co. was elected executive secretary. At the meeting it was also agreed to allot a $300 scholarship to the N. C. State School of Textiles and to Clemson College School of Textiles.

At **American Cyanamid Co.** Dr. Wilbur G. Malcolm has been elected president. Dr. Malcolm was formerly on the firm's executive committee. * * * A new, permanent exhibit center—designed to show the vital role chemistry plays in helping the U. S. make better use of its resources in the fields of health, the home, the farm, and in industry—was opened for the public in Rockefeller Center October 30, marking the 50th anniversary of the chemical company's founding. The exhibit center is located at 49 West 49th Street, New York City. * * * The first public showing of Creslan, the firm's acrylic fiber, is one of the features of the exhibit. Richly colored samples of Creslan staple and yarn, emphasizing the fiber's dyeability, and photographs and sketches showing its anticipated end-uses are among displays of the company's wide range of tex-

tile products. * * * T. E. Hazell, Jr., has been appointed sales manager of the intermediates department organic chemicals division. Hugh Puckett has been named director of sales, and R. W. Daniels, assistant director of sales for the division. Both men will make their headquarters at the Bound Brook, N. J., plant. * * * The fibers division has established a technical service department to serve customers and other processors of Creslan. The department, staffed by specialists in key production fields, includes the following technical service representatives: Bernard W. Crowe, dyeing and finishing; Philip B. Burgess, spinning; Nils R. Sorensen, knitting; and David Shieldkret, wear testing. Robert J. G. Schofield, heads the department as manager of technical service.

Officials of **Tennessee Eastman Co.**, division of Eastman Kodak Co., state that the company plans to add to its experimental equipment for the production of T-16 polyester fiber. The small amounts of fiber that will become available about the middle of 1958 will be used for further mill and trade evaluation trials.

Sidney M. Edelstein, president of DEXTER CHEMICAL CORP., presented the earliest known printed book on dyeing and spot removing, printed in Mainz, Germany in 1532, to the Alumni Memorial Library at Lowell Technological Institute during a visit of the Council of the American Association of Textile Chemists and Colorists to LTI as part of the AATCC national convention. A bound English translation of the German work accompanied the gift which will be featured in the library's rare books section. Left to right: George P. Paine, executive secretary, AATCC; Dr. Martin J. Lydon, LTI president; Mr. Edelstein; LTI librarian Joseph V. Kopycinski; George O. Linberg, AATCC president; and Dr. Howard K. Moore, director of the LTI libraries.

Celanese Corp. of America has started construction of a new manufacturing unit at its Belvidere, N. J., plant to increase its production of polyvinyl acetate emulsions, some important uses of which are the manufacture of non-woven fabrics and textile finishing. The emulsions are now produced at the Linden, N. J., plant. * * * In Pampa, Texas, the firm

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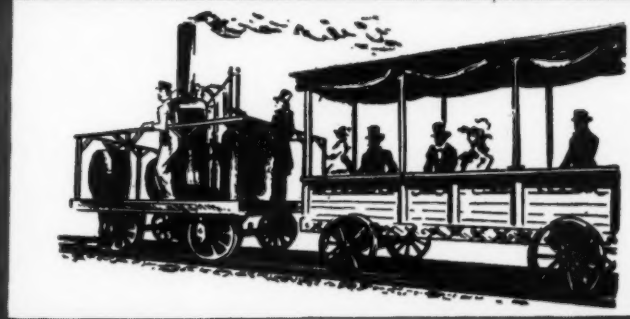
The First trip in a passenger car drawn by steam made in this country was from BALTIMORE to ELLIOT MILLS and return. 13 mi.—57 minutes. Peter Cooper, inventor of the locomotive was in charge.



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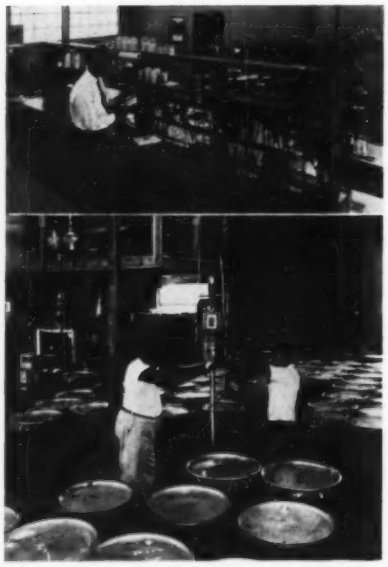
SUPPLIERS News
WHAT THEY ARE DOING

has begun operation of a new 15,000,000-pound-a-year acrylate ester plant, providing a second major source of the rapidly growing family of petrochemicals used in the textile, paper, and other industries. The new plant also supplements Celanese facilities in Pampa for production of acetic acid, acetic anhydride, and vinyl acetate.

Opening of the new steel service plant of **Joseph T. Ryerson & Son, Inc.,** warehousing subsidiary of Inland Steel Co., at Charlotte, N. C., has been announced. The new facilities replace the former leased quarters from which the company has been doing business in the area since 1953.

James K. Ames has been appointed central district sales manager of the **Colton Chemical Co.,** a division of Air Reduction Co., Inc. Mr. Ames was formerly Chicago district manager.



Interior views of Metro-Atlantic's Greenville, S. C., plant: Top photo, laboratory; bottom photo: mixing room.

E. H. Kittredge, Jr., vice-president of **Texize Chemicals, Inc.,** has been named the No. 1 chapter president in the United States by the Society for Advancement of Management. Mr. Kittredge is immediate past president of the Greenville chapter. The award is made to the chapter president whose group makes the greatest increase in activity during a year and whose chapter is judged the best operated.

Metro-Atlantic, Inc., announces the completion of its building program in Greenville, S. C., where a new manufacturing plant has been built and new boiler and reaction kettle installed which will enable many products to be manufactured in the South that had formerly been made at the Rhode Island plant. New laboratories have been provided as well as new loading and unloading facilities, and additional trucks have been placed in service.

Universal Winding Co. has announced that an initial purchase of Unifil Loom Winders has been made by Marven Looms, Inc., of West Warwick, R. I.

Franchisement of **Dixie Bearings, Inc.,** 276 Memorial Drive, S. W., Atlanta, Ga., and all branches as distributors of Parker synthetic rubber O-rings for sealing applications, has been announced by the **Parker-Hannifin Corp.** Dixie offices will be aided with technical service from representatives of the rubber products division of Parker-Hannifin, including W. E. Swan, sales engineer working out of Dayton, Ohio, and L. C. Ely, Atlanta district manager.

Diamond Crystal Salt Co. will open a regional sales office in Atlanta, Ga., at 3121 Maple Drive, N.E. Heading the office as regional sales manager will be Richard W. Carman, formerly St. Louis divisional manager of the Jefferson Island Salt Co. J. L. Scherbarth has been named assistant to the regional sales manager. Territory covered by the new office includes Georgia, Alabama, Florida, and the eastern two-thirds of Tennessee.

Elected by the **National Industrial Leather Association** to serve for the year 1958 were the following officers: Wm. H. Chestnut, Mechanical Leathers, Inc., Philadelphia, Pa., president; Wm. F. MacDonald, E. F. Houghton & Co., Philadelphia, Pa., vice-president; A. B. Laurence, Laurence Belting Co., New York, N. Y., treasurer. Textile Leather Division officers were named as follows: Julius A. Schachner, Jr., Schachner Leather & Belting Co., Charlotte, N. C., chairman; and Richard H. Rhoads, J. E. Rhoads & Sons, Wilmington, Del., vice-chairman.

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The Halsey W. Taylor Co., Warren, Ohio.

Nopco Chemical Co. in 1957 celebrated its 50th anniversary. Founded by Charles P. Gulick and Arthur Philips with an investment of $1,000, the company is currently grossing 28 million dollars with five plants and offices and warehouses throughout the United States and Canada. * * * William F. Dolan, Jr., has been appointed as technical sales representative in North Carolina and the eastern part of Tennessee, for the firm's complete line of processing chemicals.

Pennsylvania Industrial Chemical Corp. has announced the appointment of Clarence C. (Bob) Campbell as manager of textile chemicals. He will supervise textile industry projects at Picco's sales-service laboratory at Clairton and will coordinate technical service through the company's sales offices. Mr. Campbell had been with Collins & Aikman Corp. where he set up and managed a new foam rubber laboratory.

The appointment of Joseph T. Lyon as sales manager for all divisions of **G. H. Tennant Co.** has been announced. Mr. Lyon joined the firm in 1948, and came to Minneapolis in 1956 to supervise field sales. The firm recently moved into its new factory and headquarters in suburban Minneapolis.

Herbert L. Werner, founder and senior partner of **Werner Textile Consultants,** has been appointed to the research advisory committee of the Textile Research Institute by Walter Regnery, president of TRI and president of Joanna (S. C.) Cotton Mills.

Herbert C. Smith has been named sales manager for the Micarta division of **Westinghouse Electric Corp.** Formerly manager of field sales for the company's lighting division in Cleveland, Ohio, Mr. Smith succeeds S. F. Davies, who has been appointed director of marketing, general products group.

James P. Smith of South Lancaster, Mass., who has been added to the service staff of **Whitin Machine Works,** working out of the Spartanburg, S. C., office, will service Whitin woolen and worsted installations throughout the southeastern territory. Mr. Smith had been resident manager, superintendent, and assistant general manager of various mills of the Bell Co. in New Hampshire and Massachusetts.

The F. W. Warrington Co. has sold to the Amazon Cotton Mills, Thomasville, N. C., three 100-spindle heavy duty down twisters manufactured by **Fletcher Works.**

Haveg Industries has announced the acquisition of the Lithgow Chemical Co. of California, specialists in a wide variety of thermosetting and thermoplastic coatings for use in textile mills and other industries. The Lithgow organization will be operated as a division of Haveg.

Fuller Co. has directly entered the field of dust collection and recovery by the purchase of Dracco Corp. of Cleveland, Ohio, which firm will operate as an independent subsidiary of Fuller, under the same management, and will continue to produce and market the same equipment.

A new firm in Gastonia, N. C., called Manufacturing & Engineering Co. with "Maeco" as its trade name, is comprised of four individual companies as follows: Cocker Machine & Foundry Co., Ferguson Gear Co., A. B. Carter, Inc., and Gastonia Roller Flyer & Spindle Co. The aim of **Maeco, Inc.** is to handle any job in manufacturing or engineering. According to a statement, officials of the firms feel that by banding together they can get more jobs than by working individually. Officers of the new corporation are John Cocker III, president; Robert Michael, vice-president and general manager; and Bynum Carter, secretary-treasurer.

In Sanford, N. C., **Saco-Lowell Shops** has reportedly taken a lease, with option to buy, on a manufacturing building consisting of more than 60,000 sq ft of space, located on about 3¼ acres of land. The seven-year-old building is about a quarter of a mile from the center of Jonesboro Heights in Sanford.

Jeremiah J. Sullivan, Jr., has been appointed sales engineer by **Taylor Fibre Co.,** to cover the Philadelphia,

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SUPPLIERS News
WHAT THEY ARE DOING

Pa., territory. Mr. Sullivan had been a salesman for the Crosland Equipment Co. Francis M. Guiney and William J. Conlon have been appointed sales engineers, assigned to the New York branch office with headquarters at 76 South Tyson Avenue, Floral Park, L. I., N. Y. Mr. Guiney returns to the firm, having been a New York City sales engineer for the company from 1951 to 1953. Mr. Conlon was a sales engineer for Spaulding Fibre Co., before joining Taylor.

Maurice D. Holmes has joined the **Chemstrand Corp.** as a senior representative in the technical sales service department, to work out of the Decatur, Ala., office, giving technical assistance to customers in their use of fibers produced by Chemstrand. Specializing in the carpet industry applications, Mr. Holmes had been superintendent of the yarn division of Greenville (Miss.) Mills, Inc., for the past five years.

Roberts Co. has organized and held the first meeting of the Roberts Management Club, members of which are all resident salaried men of the firm, and which has as its principal purpose the establishment of a supervisory and executive training program, and the general goal of broadening the company and its management people for the expanding responsibility which lies ahead. * * * The receipt of two contracts from Canadian textile producers for modern spinning machinery totalling nearly $500,000 has been announced by the company. A contract with Cosmos Imperial Mills, Ltd., at Yarmouth, Nova Scotia, calls for modernization of 55 spinning frames. A contract with Dominion Fabrics, Ltd., calls for installation at their Welland, Ontario, mill of 20 Roberts Model 55R spinning frames, totalling 5040 spindles.

A patent covering a cam type head motion for looms that is reported to permit weaving of any kind of fancy goods, without harness skips, has been issued to A. H. Landry, treasurer of **Loomfixers Loom Works, Inc.,** according to a statement by Mr. Landry.

Thomas C. Smotherman, vice-president and sales manager of American & Efird Mills, Inc., Mount Holly, N. C., has been elected president of the **Durene Association of America** for 1958. Named vice-president was B. Everett Jordan, secretary-treasurer of the Sellers Manufacturing Co., Saxapahaw, N. C. Treasurer is Joseph P. Holt, president of the Aberfoyle Manufacturing Co., Philadelphia, Pa. Plans for expansion of the association's merchandising work with stores in 1958 have been approved.

In Canandaigua, N. Y., a new firm, **Polyarns,** has been formed for the production of plastic monofilaments for the weaving, ropemaking, automotive, and packaging fields. Produced will be Styrene, vinyl, nylon, and polyethylene. President and sales manager of the company is David R. Peet of Rochester.

Rodney Hunt Machine Co. announces the appointment of W. J. Westaway Co., Ltd., as sales representative for its industrial roll division in Canada. The Westaway organization maintains sales offices at 7335 St. Lawrence Boulevard, Montreal 14, Quebec, and also in Hamilton, Ontario.

Morningstar, Nicol, Inc., has announced the acquisition from W. A. Scholten's Chemische Fabrieken, N. V. of Foxhol, Holland, in exchange for Morningstar common stock, of the plant and facilities formerly owned and operated by Haberland Manufacturing Co. of Clifton, N. J. The new facilities will be operated as the Haberland division of Morningstar, Nicol, Inc., and will be benefited by an exchange of technical information with Scholten's of Holland. The Haberland plant production is principally devoted to the manufacture of cold swelling starch products for the textile and other industrial fields.

William L. Wearly has been elected president of **Joy Manufacturing Co.,** following the resignation of John Lawrence. A. B. Drastrup was elected executive vice-president to fill the position formerly held by Mr. Wearly, who has been with the company for 20 years. Mr. Drastrup has been manufacturing vice-president and assistant to the president.

Walter A. St. Clair, assistant sales manager of the former eastern division of the **Hyster Co.,** has been named assistant sales manager of the industrial truck division. He will work directly with domestic dealers

in the nationwide wholesale organization. James N. Rector, former Hyster district manager in the southeast district, has also been made an assistant sales manager of the industrial truck division.

Fulton Bag & Cotton Mills announce that Phil Barnet will spend full time servicing the tufting trade in the Dalton (Ga.) area.

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Lewis R. Waddey has been named branch manager of the Chattanooga, Tenn., sales office of **General Dyestuff Co.**, a sales division of General Aniline & Film Corp. Mr. Waddey, for 25 years a sales executive at the Charlotte, N. C., branch, succeeds H. Alison Webb who was recently appointed assistant sales manager.

John T. Castles has been appointed sales manager for the silicone products department of the **General Electric Co.** Formerly manager of rubber market development, Mr. Castles succeeds Jerome T. Coe who has become the department's marketing manager.

Lawrence L. Shailer, Jr., has been appointed to the newly created position of manager of textile chemicals sales development for **B. F. Goodrich Chemical Co.**, a post in which he will be responsible for promoting and coordinating the sale of company products—excepting fibers and color pigments — to the textile industry through existing departmental sales groups. He has been with the firm since 1943.

Completion of new production facilities at a cost of approximately two and three-quarter million dollars, and which will boost rated capacity of the synthetic latex plant of **The Goodyear Tire & Rubber Co.** in Akron, Ohio, to 27,500 tons annually, has been announced. It is said to be the world's largest synthetic plant devoted exclusively to the production of high solids latex.

Frank W. Gainey has retired from **National Aniline Division,** Allied Chemical & Dye Corp. as dyestuffs technician and salesman in the New England area, after 31 years service with the company. He will continue to reside in Lawrence, Mass. * * * Also retiring from the firm, as a dyestuffs technician and salesman, following a period of 38 years' association with the Chicago branch, is Frank J. Acker, who will continue to reside in Chicago, Ill.

Mr. Walter

Mr. Burdeshaw
Southern States Equipment Co.

Mr. Hewitt
Textile Shops

Mr. Wilson
Draper Corp.

Southern States Equipment Corp., Hampton, Ga., has announced that C. W. "Whitty" Walter has been elected vice-president, mechanical sales. Since 1946 he has held the position of sales manager—mechanical division. T. A. Burdeshaw has been named vice-president — engineering, and is fully responsible for all engineering activities. Mr. Burdeshaw became affiliated with the firm in 1941, serving as inspector, sales manager—electrical, and engineering manager.

The **Manton-Gaulin Mfg. Co.** announces the appointment of **The Textile Shops,** Spartanburg, S. C., as exclusive distributor of Gaulin homogenizers, colloid mills, and stainless steel pumps to the southeastern textile mills. W. A. (Bill) Hewitt, formerly southern manager for Manton-Gaulin, is joining the Textile Shops as sales engineer and will coordinate their complete warp preparation equipment sales and service activities.

Draper Corp. announces the appointment of Paul A. Wilson as divisio sales manager of the Greensboro, N. division, succeeding the late Cl. H. Draper. Mr. Wilson was previously assistant division sales manager.

Headquarters operations of **C.I.T. Corp.** have been transferred to the

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DINKLER-ANDREW JACKSON, *Nashville*
THE ST. CHARLES, *New Orleans*

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JAMAICAN MOTOR LODGE
Jacksonville, Fla.
THE BELVEDERE • Atlanta, Ga.

DINKLER INTERNATIONAL HOTELS
THE FORT GEORGE
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SUPPLIERS News
WHAT THEY ARE DOING

newly-constructed C.I.T. Financial Building at 650 Madison Ave., an eight-story building which will serve as executive offices for the firm, its parent company, and other operating subsidiaries.

Morehead Cotton Mills Co., Spray, N. C., has installed new equipment purchased from **F. A. Young Machine Co.**, as follows: 32 frames 3¾" gauge NYAF full anti-friction 10 to 60 to be made from 48 frames of their 2¾" gauge spinning; also open air creels for 12" x 7" bobbins.

Charlotte (N. C.) Textile Engravers has purchased the Greenville, S. C., plant of Eastern Engraving Co., Johnson, R. I. The modernized and expanded Greenville plant will be operated as the Greenville division of the Charlotte Textile Engravers. Russell Schenck, vice-president and general manager of the parent firm, is in charge of both plants; and Ronald Harper, plant manager in Charlotte, has been advanced to assistant general manager and will direct operations in Greenville.

At **Clinton Corn Processing Co.**, R. H. Jackson has been promoted to general sales manager of the eastern division, succeeding L. D. "Don" Buhrer who has become regional vice-president of Fleischmann Malting Co., in charge of sales for the eastern district. Both Fleischmann and Clinton are divisions of Standard Brands, Inc. In another Clinton promotion R. H. Boegel has become district manager in charge of the Philadelphia territory.

Robert P. Rhodes has been appointed Middle Atlantic divisional sales manager for **Fabulized, Inc.**, Philadelphia, Pa., manufacturer of "Fabulized," a new finishing process which gives synthetic fabrics and blends a high degree of absorbency. Mr. Rhodes will operate from company headquarters at 518 So. Delaware Ave. J. Thomas Lindley has been named southern divisional sales manager with offices at 846 S. Main St., Burlington, N. C. * * * The firm has appointed Prospect Chemical Co., Mt. Prospect, Ill., as midwest sales representative.

Frank H. Cotton, formerly vice-president in charge of sales at Product Sales, Inc., has joined with Raymond L. McCauley, formerly southern sales manager for the same company, in establishing a new general sales agency handling textile equipment and accessories. Operating under the name of **Cotton-McCauley & Co., Inc.**, the firm has been appointed exclusive selling agents for the products of Machinecraft, Inc., Whitman, Mass., which will continue to manufacture products known to the trade as "Cleanalign" saddles, "Climax" and "Cleandraft" top rolls, "Easi-Creel," and Flexing changeover. Future expansion plans include the development and manufacture of allied textile equipment and accessories. The main office, headed by Mr. Cotton, president, is located at 188 Main St., Pawtucket, R. I., while Mr. McCauley, vice-president, will supervise the activities of the southern division, at 3 Hammond St., Greenville, S. C., where service facilities will be maintained under the supervision of Lewis C. Bergin. Cecil A. McAbee covers the southern territory as special sales representative.

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At the end of the listings under the New Equipment headings, reference is made to the Mid-November issue of TEXTILE INDUSTRIES. This is TI's Annual Product Parade & Buyer's Guide, which is issued in mid-November of each year. It is a handy reference which should be useful throughout the year, combining in one convenient volume these three features: (1) a review of new items made commercially available during the preceding twelve months, (2) free literature available from suppliers, and (3) a departmentalized buyer's guide.

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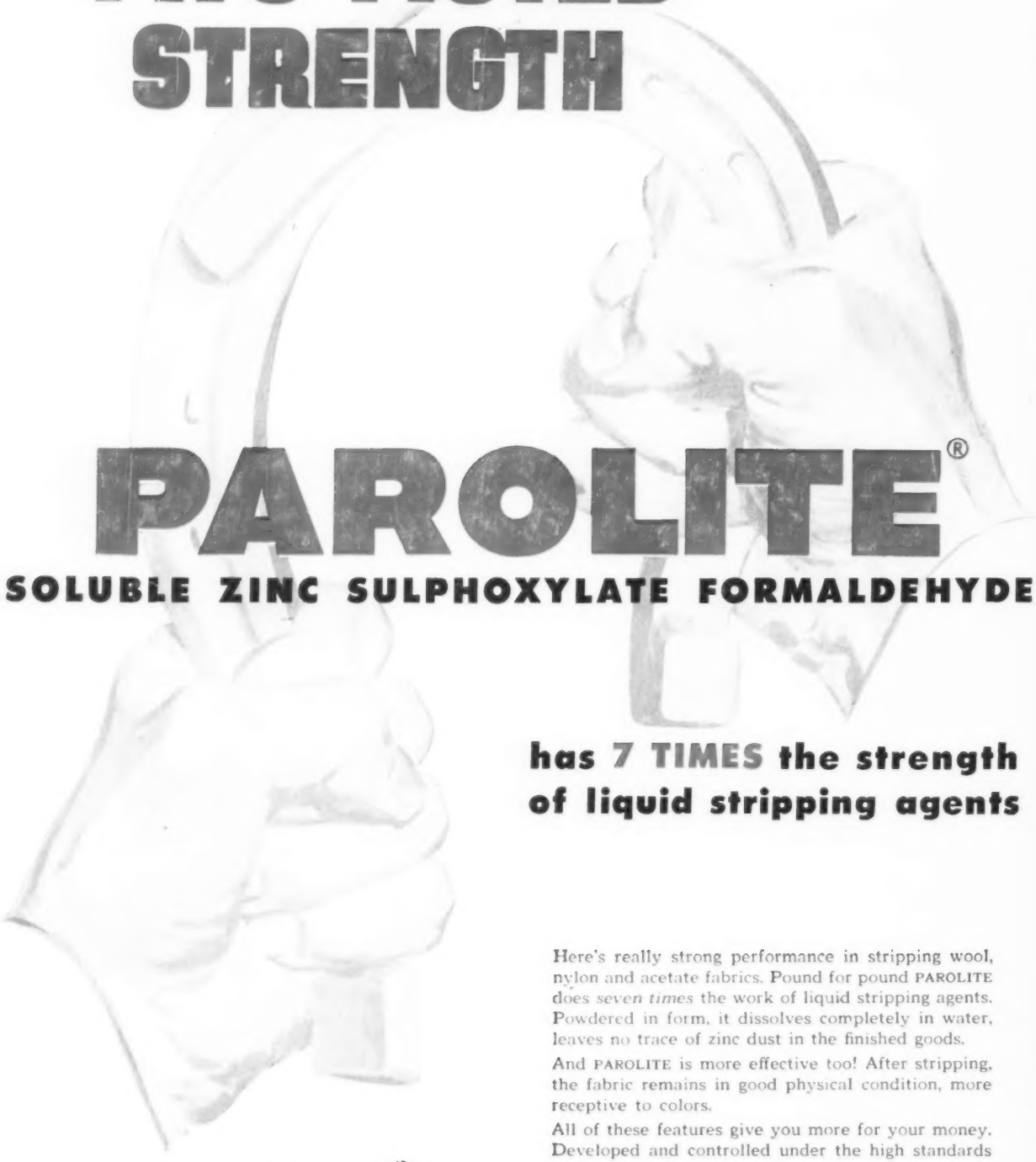

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